



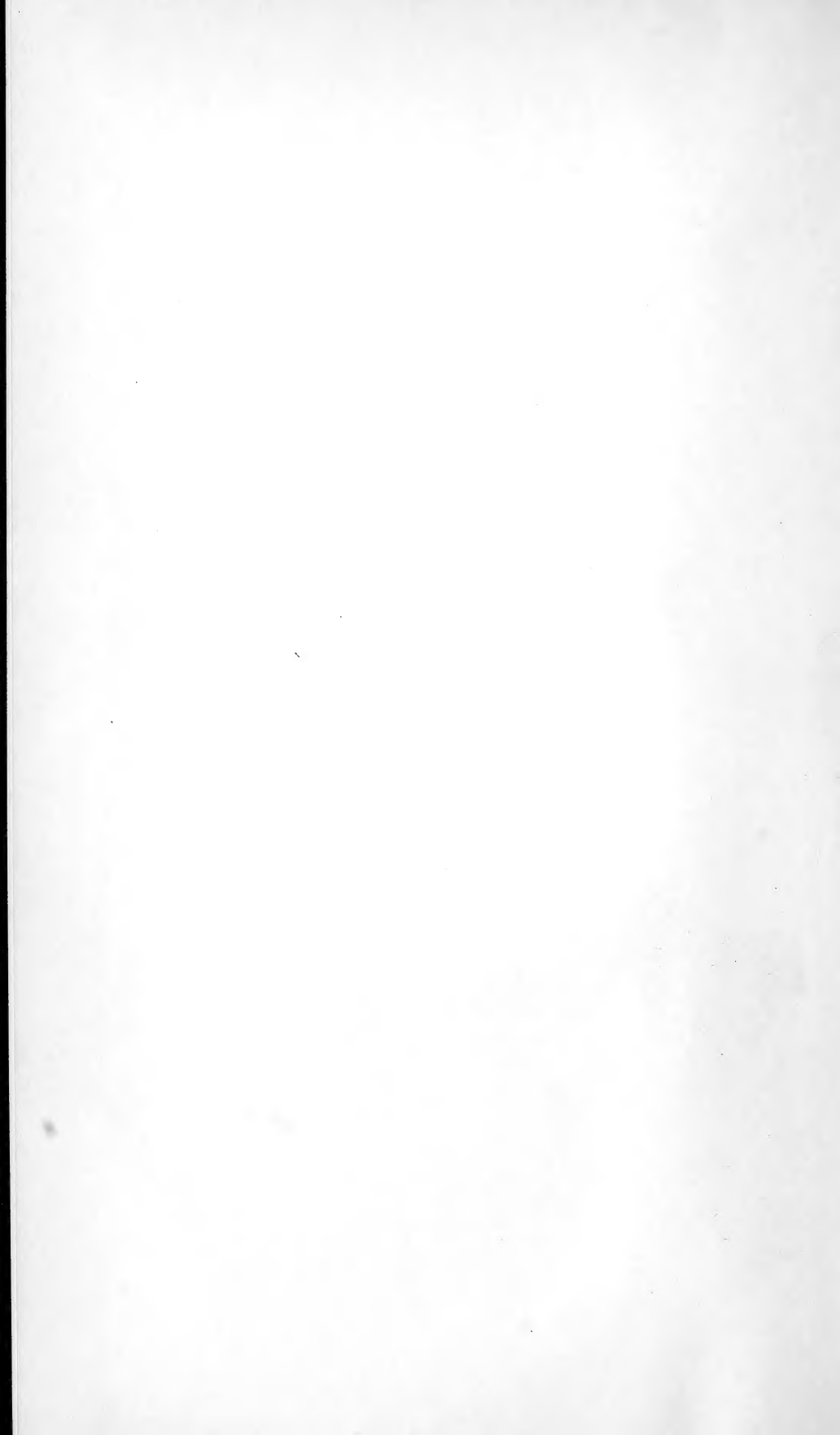
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**OPINIONS AND DECLARATIONS
RENDERED BY THE INTER-
NATIONAL COMMISSION ON
ZOOLOGICAL NOMENCLATURE**

VOLUME 9

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

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re-election, as prescribed by the International Congress of Zoology*).

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Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

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Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

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Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

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Offices of the Trust : 41 Queen's Gate, London, S.W.7.

FOREWORD

The present volume—the ninth of the present series—contains the second instalment of *Opinions* adopted by the International Commission on Zoological Nomenclature in the period between the close of the Thirteenth International Congress of Zoology, Paris, 1948, and the opening of the Fourteenth International Congress of Zoology, Copenhagen, 1953. The *Opinions* concerned are *Opinions* 312—333. In addition the present volume contains five *Declarations* (*Declarations* 13—17) adopted by the International Commission in the same period. Each of these *Declarations* was submitted to, and approved by, the Copenhagen (1953) Congress.

2. The present volume comprises 490 pages (T.P.—XIV, i—lx, 1—416). The volume is thus somewhat larger than its immediate predecessor.

3. Of the twenty-two *Opinions* included in the present volume one of the applications relating to the cases concerned was submitted by three separate authors and three applications were submitted by two joint authors, thus bringing the total number of applicants to twenty-seven.

4. Three of the applications dealt with in this volume were concerned with the status of books and the remaining nineteen with individual names. Of this latter group, fourteen (73.5 per cent.) involved the use of the Plenary Powers. The use of these Powers was not involved in the applications relating to the status of individual books.

VI

5. The nineteen applications relating to individual names dealt with in the *Opinions* published in the present volume, when grouped by reference to the Classes of the Animal Kingdom to which the genera or species concerned belong, are distributed as shown in the following table. In the same table the applications are arranged so as to distinguish those which involved the use of the Commission's Plenary Powers from those which did not.

TABLE 1

Distribution of applications (a) by Classes of the Animal Kingdom and (b) whether they involved the use by the Commission of its Plenary Powers

<i>Name of Class</i>	<i>Number of applications</i>		
	<i>Involving the use of the Plenary Powers</i>	<i>Others</i>	<i>Total</i>
Rhizopoda	1	—	1
Rotifera	1	—	1
Crustacea	1	—	1
Insecta	4	1	5
Merostomata	1	—	1
Pelecypoda	3	1	4
Cephalopoda	1	2	3
Asteroidea	1	—	1
Echinoidea	—	1	1
Reptilia	1	—	1
Totals	14	5	19

6. When the twenty-seven applicants are arranged by reference to the countries in which they are resident, applications are seen

to have been received from the following countries (arranged in alphabetical order) :—

TABLE 2

Distribution of applicants by country of residence

<i>Country of Residence</i>	<i>Number of applicants</i>
Canada	1
Germany	1
Netherlands	3
Norway	1
Trinidad	1
United Kingdom	11
United States of America	9
Total	27

7. Under the Rulings given in the *Opinions* comprised in the present volume, 45 names were placed on the *Official List of Generic Names in Zoology* and 55 names on the *Official List of Specific Names in Zoology*. In the same *Opinions*, 51 names were placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* and 30 names on the *Official Index of Rejected and Invalid Specific Names in Zoology*. Finally, the title of one work was placed on the *Official List of Works Approved as Available for Zoological Nomenclature* and the titles of four works on the *Official Index of Rejected and Invalid Works in Zoological Nomenclature*.

VIII

8. The nineteen *Opinions* dealing with individual names published in the present volume contain 65 comments received from interested specialists. These comments were in many cases joint comments from a number of specialists. When account is taken of this consideration, the number of specialists who contributed comments in the foregoing block of *Opinions* is seen to number 158. In addition, 6 comments were received in regard to the applications relating to the status of books.

9. If the comments relating to individual names are grouped according to the Class in the Animal Kingdom to which the genus or species concerned belong, the distribution of the comments is found to be as follows :—

TABLE 3

Distribution of comments on applications relating to individual names, by Classes of the Animal Kingdom

<i>Name of Class</i>	<i>Number of Comments</i>
Rhizopoda	1
Crustacea	9
Insecta	3
Merostomata	7
Pelecypoda	89
Cephalopoda	28
Asteroidea	12
Echinoidea	8
Reptilia	1
Total	158

10. When the authors of the comments on individual names dealt with in the *Opinions* published in the present volume are

grouped by reference to their country of residence, the distribution is found to be as follows :—

TABLE 4

Distribution of comments on applications relating to individual names, by country of residence of the specialists concerned

<i>Country of Residence</i>	<i>Number of Comments</i>
Austria	1
Denmark	1
France	5
Germany	6
Netherlands	1
Spain	1
United Kingdom	23
United States of America	120
Total	158

11. As in the case of the preceding volume of this series, the Commission is indebted to Miss Mary Cosh, M.A. for the preparation of the indexes of the present volume. In style and scope these indexes follow exactly the models laid down for earlier volumes.

FRANCIS HEMMING

*Secretary to the International Commission
on Zoological Nomenclature*

28 Park Village East,
Regent's Park,
LONDON, N.W.1.

5th March 1955.

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OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 7. Pp. i—xii

DECLARATION 13

Rejection of the distribution of a paper in microfilm, or on a microcard or the like, as a method of "publication" for the purposes of Article 25 of the *Règles*



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN DECLARATION 13

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President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil.*)

Secretary : Mr. Francis Hemming (*London, England.*)

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Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

DECLARATION 13

REJECTION OF THE DISTRIBUTION OF A PAPER IN MICROFILM, OR ON A MICROCARD OR THE LIKE, AS A METHOD OF "PUBLICATION" FOR THE PURPOSES OF ARTICLE 25 OF THE "REGLES"

DECLARATION :—There shall be added to the list of methods prescribed—by the Thirteenth International Congress of Zoology (as recorded in Conclusion 15(1)(b)) of the Official Record of Proceedings of the International Commission on Zoological Nomenclature at the Seventh Meeting held during its Paris Session in July 1948 (1950, *Bull. zool. Nomencl.* 4 : 219)—as being methods of distributing zoological books and papers which do not qualify a new name as having been made public in a publication ("divulgué dans une publication") the following new item :—“(iv) the inclusion of a new name in a book or paper distributed in microfilm, or on a microcard or the like”.

I.—THE STATEMENT OF THE CASE

On 6th February 1951, Professor G. Winston Sinclair (for the Joint Committee on Zoological Nomenclature for Paleontology in America) and Dr. Richard E. Blackwelder (for the Nomenclature Committee of the Society of Systematic Zoology) addressed a joint letter to the International Commission, in which, on behalf of the bodies which they respectively represented, they (1) asked for a ruling that the distribution of a paper in the form of a microfilm does not constitute "publication" for the purposes of the *Règles*, and (2) cited, as an example of the practice against which they asked for a ruling, the case presented by a paper by La Rocque (A.) containing the names of three new nominal

genera, and of fourteen new nominal species, of the Class Pelecypoda included in a paper which had been distributed in the form of a microfilm in 1948 but had not appeared in printed form until 1950. The following is the application so submitted :—

**Request for a ruling that the distribution of a microfilm does not constitute
“ publication ” for the purposes of Article 25 of the “ Règles ”**

Application submitted jointly by the JOINT COMMITTEE ON ZOOLOGICAL NOMENCLATURE FOR PALEONTOLOGY IN AMERICA and by the NOMENCLATURE COMMITTEE OF THE SOCIETY OF SYSTEMATIC ZOOLOGY

(Letter, with enclosures, dated 6th February 1951, signed jointly by Dr. G. Winston Sinclair (for the Joint Committee on Zoological Nomenclature for Paleontology in America) and Dr. Richard E. Blackwelder (for the Nomenclature Committee, Society of Systematic Zoology).)

1. We enclose a petition which we would ask you to lay before the Commission for their opinion, and which we would ask you also to publish in the *Bulletin of Zoological Nomenclature*.
2. We also enclose a list of zoologists who, having seen the petition and studied it, have indicated in writing that they wish to be recorded as supporting it. Dwight Davis (Chicago Natural History Museum) wishes to be recorded as opposing the petition.

Enclosure

3. Within recent years there has arisen, at least in America, a commerce in copies of books or manuscripts photographically reproduced on 35 mm. film, known as “ microfilm ”. This practice was at first a convenience to scholars, who could thus obtain copies of rare or unobtainable works for study and reference, and the microfilm was usually supplied by large libraries.
4. From this beginning the practice has expanded, until now not only books but unpublished typescripts are being offered for sale, and microfilm is being advertised as a cheap and convenient method of “ publishing ” scholarly works which (because of their bulk or their lack of general appeal) would not be readily accepted by a regular publishing house. The distribution and offering for sale of such microfilm is held by some, including high academic officers, to constitute publication.

5. We ask the Commission to rule that, regardless of its status for other purposes material which is available to the public only in the form of microfilm is not to be considered "published" within the meaning of the *Règles*.

6. Should the Commission prefer to have before them a definite example, may we suggest that the following case be considered :

In 1948 a paper entitled "Pre-Traverse Devonian Pelecypods of Michigan", by Aurèle La Rocque, was offered for sale as "University Microfilms Publication 1059", consisting of a microfilm copy of a typescript and accompanying plates of photographs. This offering was advertised to an extensive mailing-list of libraries and others, and the paper has been available to the public in this form since 1948.

In 1950 the same paper was issued in printed form as : Contributions from the Museum of Paleontology, University of Michigan, Volume 7, No. 10 (pp. 271—366, 19 plates).

In this paper (in both forms) are described three new genera and fourteen new species of pelecypods.

7. We ask the Commission to rule that the names of these new taxonomic units are to be ignored until their appearance in printed form in 1950.

Annex to Enclosure

List of zoologists supporting the petition :

a. Joint Committee on Zoological Nomenclature for Paleontology in America. Members individually polled and unanimous in support, viz. :

Raymond C. Moore, *University of Kansas, Lawrence*
 A. S. Romer, *Museum of Comparative Zoology, Cambridge, Mass.*
 David H. Dunkle, *U.S. National Museum, Washington*
 S. W. Muller, *Stanford University, California*
 J. Marvin Weller, *Walker Museum, University of Chicago*
 John B. Reeside, Jr., *U.S. Geological Survey, Washington*
 D. L. Frizzell, *Rolla, Missouri*
 A. Myra Keen, *Stanford University, California*
 Katherine V. W. Palmer, *Ithaca, New York*
 J. Brookes Knight, *U.S. National Museum, Washington*
 John W. Wells, *Cornell University, Ithaca, New York*
 G. Winston Sinclair, *University of Michigan, Ann Arbor.*

b. Individual zoologists in Chicago, in favour of the petition :

Karl P. Schmidt
 Fritz Haas
 Bryan Patterson
 Rainer Zangerl
 Rupert Wenzel
 William Beecher
 Henry S. Dybas
 Robert H. Denison
 Robert F. Inger
 Emmett R. Blake
 Austin L. Rand
 Melvin A. Taylor, Jr.
 Colin Campbell Sanborn
 Eugene S. Richardson, Jr.

c. Nomenclature Committee, Society of Systematic Zoology Members, individually polled ; all replies were approval :

Ernst Mayr, *American Museum Natural History*
 Robert R. Miller, *University of Michigan*
 Robert L. Usinger, *University of California*
 John W. Wells, *Cornell University*
 Ellsworth C. Dougherty, *University of California*
 J. Brookes Knight, *U.S. National Museum*
 E. Raymond Hall, *University of Kansas*
 Richard E. Blackwelder, *U.S. National Museum.*

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of the present application, the question whether the distribution of books or papers in the form of microfilm constitutes "publication" for the purposes of Article 25 of the *Règles* was allotted the Registered Number Z.N.(S.) 528.

3. Publication of the present application : The present application was sent to the printer in April 1951 and on 28th September 1951 was published in Part 11 of volume 2 of the *Bulletin of Zoological Nomenclature* (Sinclair & Blackwelder, 1951, *Bull. zool. Nomencl.* **2** : 306—308).

4. Support for the present application : The publication of the present application in the *Bulletin of Zoological Nomenclature* elicited support from the under-mentioned groups of specialists and individual specialists. All the statements so received were published in 1951 and 1952 in the *Bulletin*, either in volume 2 or in volume 6. The references to the places where these statements were so published are given in each case in the following list. These communications were published in the *Bulletin of Zoological Nomenclature* in the normal manner and the substance of the representations so submitted were summarised in the note on this case included in the Agenda submitted to the Copenhagen Meetings of the Commission and the Colloquium (paragraph 11 below). For this reason these communications are not reprinted in full in the present *Declaration*.

- (1) Committee on Nomenclature of the American Museum of Natural History, New York (1951, *Bull. zool. Nomencl.* 2 : 308) :

The above communication was signed by the following specialists :—

Mont A. Cazier
 Edwin H. Colbert
 Norman D. Newall
 George H. H. Tate
 John T. Zimmer (*Chairman*)

- (2) E. H. Behre (*Louisiana State University and Agricultural and Mechanical College, University Station, Baton Rouge, Louisiana, U.S.A.*) (1951, *Bull. zool. Nomencl.* 2 : 310)
- (3) “Zoological Record” Committee of the Zoological Society of London (1951, *Bull. zool. Nomencl.* 2 : 311—312) :

This communication was approved at a meeting of the Committee attended by the following specialists :—

Sheffield A. Neave, C.M.G., O.B.E., D.Sc. (*Chairman*)
 William J. Hall, M.C., D.Sc.
 Francis Hemming, C.M.G., C.B.E.
 Sir Norman Kinnear, C.B.
 Terence Morrison-Scott, D.S.C., M.A., M.Sc.
 Malcolm Smith
 C. J. Stubblefield, D.Sc., F.R.S.
 L. Harrison-Matthews, Sc.D. (*Scientific Director and Deputy Secretary, Zoological Society of London*)

- (4) Robert Mertens (*Natur-Museum u. Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a. Main, Germany*) (1952, *Bull. zool. Nomencl.* 6 : 223).

5. Objections to the present proposal : The under-mentioned specialists expressed themselves as being in opposition to the proposal submitted. For reasons similar to those explained in the preceding paragraph the communications so received are not reprinted in full in the present *Declaration*.

- (1) Charles H. Blake (*Massachusetts Institute of Technology, Department of Biology, Cambridge, Massachusetts, U.S.A.*) (1951, *Bull. zool. Nomencl.* 2 : 309)
- (2) Joshua L. Baily, Jr. (*San Diego, California, U.S.A.*) (1952, *Bull. zool. Nomencl.* 6 : 223).

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

6. Issue of Voting Paper V.P.(52)38 : On 9th May 1952, a Voting Paper (V.P.(52)38) in regard to the present case was issued to the Members of the Commission. Two separate issues were submitted to the Commission in this Voting Paper, the first, the question of the acceptability under the *Règles* of the distribution of a paper in the form of a microfilm as a method of "publication", second, the particular case of the names for new genera and species in the Class Pelecypoda contained in a paper by La Rocque distributed in the foregoing manner in 1948. Under the revised procedure prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 136—137), general issues of principle such as those involved in the first of the problems referred to above are no longer to be dealt with by the Commission in the "*Opinions*" Series but are to be the subject of *Declarations*. Accordingly, the question of the status of names in papers distributed in microfilm form falls to be dealt with in a *Declaration* and the particular case of

La Rocque's Pelecypod names of 1948 in an *Opinion*. The first of these matters forms the subject of the present *Declaration*, the second, the subject of *Opinion* 318 rendered simultaneously with the present *Declaration*. The following is the text of the proposal relating to the first of these subjects on which the Members of the Commission were invited to vote, either affirmatively or negatively, on Voting Paper V.P.(52)38 :—

There shall be added to the list of methods prescribed by the Thirteenth International Congress of Zoology (as recorded in Conclusion 15(1)(b) of the Official Record of the Proceedings of the International Commission on Zoological Nomenclature at its Seventh Meeting held during its Paris Session in July 1948 (1950, *Bull. zool. Nomencl.* 4 : 219)) as being methods of distributing zoological books and papers which do not qualify a new name contained therein as having been made public in a publication ("divulgué dans une publication") the following new item : "(iv) the inclusion of a new name in a book or paper distributed in microfilm".

7. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three Month Rule, the Prescribed Voting Period closed on 9th August 1952.

8. Particulars of the Voting on the draft "Declaration" submitted in Voting Paper V.P.(52)38 : The state of the voting on Voting Paper V.P.(52)38 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes on the draft "Declaration" submitted in Voting Paper V.P.(52)38 had been given by the following seventeen (17) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Riley ; Dymond ; Calman ; Hankó ; Bonnet ; Vokes ; do Amaral ; Pearson ; Hemming ; Bradley ; Esaki ; Lemche ; Mertens ; Stoll ; Cabrera ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Paper not returned, one (1) :*

Jaczewski.

9. Declaration of Result of Vote : On 11th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)38, signed a Certificate that the Votes cast were as set out in paragraph 8 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

IV.—APPROVAL OF THE PRESENT “ DECLARATION ”
BY THE FOURTEENTH INTERNATIONAL
CONGRESS OF ZOOLOGY, COPENHAGEN,
1953

10. By the time that the voting on the present *Declaration* was completed, the whole organisation of the Commission was being directed to the preparations for the discussions on zoological nomenclature which were due to take place at Copenhagen in July 1953, first at the Colloquium on Zoological Nomenclature then being organised by the International Trust for Zoological Nomenclature, second, by the International Commission on Zoological Nomenclature, and finally by the Fourteenth International Congress of Zoology, both in its Section on Nomenclature and in Plenary Session. It was accordingly decided not to arrange, as would normally have been done, for the immediate publication of the present *Declaration* in the “ *Declarations* ” Series, but, in place of so doing, to include the subject matter of this *Declaration* as one of the items of the Agenda then being prepared for the Copenhagen meetings.

11. Under the foregoing decision, the question whether the distribution of a paper in the form of a microfilm constitutes “ publication ” for the purposes of the *Règles* was entered as

Case No. 27 on the Agenda for the Copenhagen meetings. Two documents were submitted in connection with the foregoing item on the Copenhagen Agenda : (1) a note by the Secretary, (a) reporting the receipt of the joint application by the Joint Committee on Zoological Nomenclature for Paleontology in America and the Nomenclature Committee of the Society of Systematic Zoology, (b) giving particulars of the comments received in regard to this application consequent upon its publication in the *Bulletin of Zoological Nomenclature*, and (c) setting out the terms of the *Declaration* adopted by the Commission in this matter ; (2) a note by Professor J. Chester Bradley discussing the possibility of the acceptance of the distribution of microfilms as a method of "publication" at some later date, in the event of the development of techniques for publishing and distributing microfilm, for securing its continued availability, and for storing, cataloguing, recording and advertising the content of papers distributed in this form without giving rise to the opposition which in existing circumstances would, in his view, be inevitable. The documents relating to this item on the Copenhagen Agenda were published on 23rd July 1953 in the second of the two volumes of the *Bulletin* devoted to the Copenhagen meetings (Hemming, 1953, *Bull. zool. Nomencl.* **10** : 270—274 ; Bradley, 1953, *ibid.* **10** : 275).

12. Case No. 27 on the Copenhagen Agenda was considered at a Joint Meeting between the International Commission on Zoological Nomenclature and the Colloquium on Zoological Nomenclature held in the Meeting Room of the Academic Senate of the University of Copenhagen on Saturday, 1st August 1953 at 0900 hours. In the discussion on this item it was suggested that it would be advantageous to widen the scope of the provision proposed to be added to the *Règles* in such a way that it covered not only the distribution of papers in microfilm but also the distribution of papers on microcards or the like. The Commission accepted this suggestion and agreed to expand the terms of its *Declaration* accordingly. This and other *Declarations* adopted prior to the Copenhagen Session were submitted to the Congress by the Commission in the Report which it adopted at a Meeting held in the University Buildings, Copenhagen, on Monday, 3rd August 1953 at 1810 hours. This Report was approved by the Section on Nomenclature of the Fourteenth International

Congress of Zoology at a Meeting held jointly with the International Commission on Zoological Nomenclature, in the University Buildings, Copenhagen, on Wednesday, 12th August 1953 at 0900 hours. The Report so approved was submitted to, and approved and adopted by, the International Congress of Zoology at its Final Plenary Session held on the afternoon of the same day.

13. The text of the decision relating to the status of papers distributed in microfilm or on microcards or the like (1) as finally adopted by the International Commission at its meeting held on 1st August 1953 (paragraph 12 above), and (2) as approved and adopted by the Fourteenth International Congress of Zoology, Copenhagen, 1953, is given at the head of the present *Declaration*. It was included also in the Official Record of the decisions on zoological nomenclature taken by the foregoing Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 60—61, Decision 107).

14. The present *Declaration* shall be known as *Declaration Thirteen* (13) of the International Commission on Zoological Nomenclature.

DONE in London, this Eighth day of April, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 12. Pp. xiii—xxiv

DECLARATION 14

Clarification of the meaning of Rule (f) in Article 30 of the *Règles* (Rule relating to the type species of a nominal genus established to replace an earlier nominal genus)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN DECLARATION 14

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

- Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).
- Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).
- Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).
- Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).
- Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).
- Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).
- Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).
- Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).
- Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948)
- Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).
- Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).
- Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).
- Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).
- Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).
- Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).
- Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).
- Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).
- Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

DECLARATION 14

CLARIFICATION OF THE MEANING OF RULE (F) IN ARTICLE 30 OF THE "RÈGLES" (RULE RELATING TO THE TYPE SPECIES OF A NOMINAL GENUS ESTABLISHED TO REPLACE AN EARLIER NOMINAL GENUS)

DECLARATION :—Rule (f) in Article 30 of the *Règles* is to be interpreted (a) as though the words "expressly published" were inserted after the word "is" in place of the word "proposed", and (b) as though the words "some specified generic name of older date" were substituted for the words "another generic name".

I.—THE STATEMENT OF THE CASE

An application submitted to the Commission by Mr. R. G. Fennah (*Imperial College of Tropical Agriculture, Trinidad*) in regard to the generic names *Laternaria* Linnaeus, 1764, and *Fulgora* Linnaeus, 1767 (Class Insecta, Order Hemiptera)¹ raised a general issue regarding the interpretation of Rule (f) in Article 30, relating to the type species of a nominal genus established as a substitute for an older nominal genus, the name of which is, or is believed to be, invalid. This general question was submitted to the Commission by the Secretary concurrently with the submission of Mr. Fennah's application in regard to the two names referred to above, since a definitive ruling by the Commission on the question of interpretation involved was an indispensable preliminary to the taking of a decision by the Commission on

¹ See *Opinion 322* (1954, *Ops. Decls. int. Comm. zool. Nomencl.* 9 : 185—208).

Mr. Fennah's application. The following is the text of the application so submitted by Mr. Hemming :—

Suggested adoption of a "Declaration" clarifying the meaning of Rule (f) in Article 30 (Rule relating to the type species of a nominal genus established to replace an earlier nominal genus)

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

The application relating to the type species of the genus *Fulgora* Linnaeus, 1767 (Class Insecta, Order Hemiptera) submitted to the International Commission on Zoological Nomenclature by Mr. R. G. Fennah (*Imperial College of Tropical Agriculture, Trinidad*) raises in a direct manner a question relating to the interpretation of Rule (f) in Article 30 of the *Règles*. Any answer to the question submitted necessarily implies the giving of a ruling by the Commission on the interpretation of the foregoing Rule. Under the decisions on procedure taken by the Thirteenth International Congress of Zoology at its meeting held in Paris in 1948, interpretative decisions of this kind are in future to be recorded by the Commission in the series "Declarations", the series "Opinions" being reserved for decisions in regard to individual nomenclatorial problems not involving any new interpretation of the *Règles* (see, 1950, *Bull. zool. Nomencl.* 4 : 132—137).

2. Under the procedural decision referred to above, it will therefore be necessary in future for the International Commission, when considering an application which is concerned primarily with obtaining a ruling in regard to some particular name, but which requires an interpretative decision on some aspect of the *Règles* as a condition precedent to the giving of a ruling on the individual case submitted, to deal first with the general question of principle involved, and, having done so, to deal with the individual problem of nomenclature submitted. In the present case, therefore, a "Declaration" will be needed on the interpretation of Rule (f) in Article 30, and also an "Opinion" on the type species of the genus *Fulgora* Linnaeus, that *Opinion* being based, so far as concerns the meaning to be attached to Rule (f), on the *Declaration* to be decided upon immediately previously.

3. *Rule (f) in Article 30* : Rule (f) in Article 30 contains the following provision for determining (where applicable) the type species of a nominal genus, for which no such species was designated (Rule (a)) or

indicated (Rules (b), (c), or (d)) by the author by whom the generic name in question was first published :—

- (f) In case a generic name without originally designated type species is proposed as a substitute for another generic name, with or without type species, the type species of either, when established, becomes *ipso facto* type species of the other.

4. *The twofold issue involved* : In this, as in similar cases, a twofold issue is involved : First, what is the meaning of the provision, as it actually stands in the *Règles* ? Second, is that meaning the one which it is desirable that the provision should have ? Further, it is possible that, whatever answer is given to these questions, it may be considered desirable to amend or clarify the wording of the existing provision in the *Règles* ; an amendment of the wording would certainly be necessary if it were to be considered desirable to alter the meaning of the existing provision ; a verbal change might be considered necessary, if it were to be considered that the meaning of the existing provision was the desirable meaning but that it was not expressed in an absolutely unambiguous manner. In the following paragraphs the main issues involved are considered in turn. Finally, consideration is given to the question whether any, and, if so, what changes in wording are required in the existing provision.

5. *The meaning of Rule (f) in Article 30, in its present form* : The key word in Rule (f) in Article 30, as it exists at present, is the word "proposed", for the whole Rule is concerned to define the situation which arises when a new generic name "is proposed" as a substitute for another generic name. It is necessary therefore carefully to consider the meaning which properly attaches to the word "proposed", as used in this Rule. When an author publishes a new generic name, he may adopt either of two courses : (1) he may state why he considers the new name to be necessary (*e.g.* because a name is needed for a previously unrecognised genus or for a genus, which, although already recognised, does not possess a nomenclatorially available name), or (2) the author concerned may simply publish the new generic name without any explanation as to why he does so or even without any indication that the name is a new name. Only in the case of names falling in the first of these classes is there any evidence as to the reason which led the author concerned to "propose" (*i.e.* to publish) the new generic name : where the author either (a) adopts a formula, or (b) uses words, which either clearly state or definitely imply that the new name so published is intended to be a substitute for some previously published name, then and then only can it be stated as an ascertained fact that the new name was in fact "proposed" as a substitute for some other name. In the absence of such a formula or such words, it must always be a matter of subjective personal opinion whether or not the later name was intended by its author to be a substitute name or whether it was published inadvertently or through ignorance of the

existence of the earlier name in question. Such a name may in particular cases, have been intended to be a substitute name and it is possible sometimes to guess why it was that the author concerned published it in preference to using the older name already available (e.g. in the case of XVIIIth century zoologists, from aversion from absolute tautonomy between generic names and specific trivial names), but even in such a case the lack of direct evidence as to the reasons which prompted the author concerned to publish the new generic name makes it impossible to establish as a fact why it was that the author concerned "proposed" that name. Accordingly, on any strict interpretation of the words used in Rule (f) in Article 30, it must be concluded that that Rule applies only to those cases, where an author, when publishing a new generic name, refers also to a previously published generic name and, either by the use of some formula or through explanatory words, indicates that the new name is a substitute (for whatever reason) for the older name in question.

6. *The bearing of Opinion 10 on the meaning of Rule (f) in Article 30* : While for the reasons given in the preceding paragraph, it is clear that the wording employed in Rule (f) in Article 30 is such as to bring within the scope of that Rule only generic names which, when first published, were accompanied by an express indication that they were substitutes for previously published generic names, there is fortunately direct evidence provided by the Commission itself very shortly after the enactment of Article 30 in its present form that the foregoing is not only the meaning which inevitably attaches to the words used in Rule (f) but is also the meaning which the Commission, as the body by which that Rule had been drafted and recommended to the Congress, intended that Rule to convey. This evidence is provided by the Commission's *Opinion 10*. The date on which this *Opinion* was adopted is not known but it was first published in July 1910 (*Smithson. Publ.* 1938 : 15—16), together not only with the nine preceding *Opinions* (of which *Opinions* 6—9 were then published for the first time) but also with the next fifteen following *Opinions* (*Opinions* 11—25) : it is likely therefore that *Opinion 10* was adopted not later than sometime in 1909 and possibly earlier, in any case within two years of the adoption of the present Article 30 by the Boston Congress in 1907. *Opinion 10* is concerned to make clear what is (or may be) the type species of a genus established with limits identical with those of a previously established genus. If Rule (f) in Article 30 did not require that, in order to come within its scope, a generic name must be published with an express indication that it was intended to be a substitute for some previously published name, a name published for a genus with limits identical with those of a genus having previously published name would fall within the scope of Rule (f) and in consequence the selection of a type species for either of the nominal genera concerned would (under that Rule) automatically constitute also the selection of the same species to be the type species of the other genus. We see,

however, from *Opinion 10* that, where two nominal genera are established with identical limits, the type species of one is not automatically the type species of the other ; on the contrary, any author is free to select any of the originally included species to be the type species of either. Here therefore we have implicit evidence from the Commission itself to show that an express indication that a name is published as a substitute for another name is necessary, in order to bring the later published of the two names within the scope of Rule (f) in Article 30.

7. *Question whether the present meaning of Rule (f) in Article 30 is the desirable meaning* : Having now established, both by the normal method of interpretation and by reference to a governing decision already given by the Commission itself, what is the meaning properly attaching to Rule (f) in Article 30, as it at present stands, we may turn to consider whether that is the meaning which it is desirable that that Rule should bear. The choice is a simple one : Is it desirable (1) that (as at present) an author publishing a new generic name must expressly indicate (in some clear manner) that that name is a substitute for some specified earlier name, in order to bring the new name within the scope of Rule (f), or (2) that the wording of that Rule should be relaxed in such a way as to bring within the scope of that Rule not only any name expressly published as a substitute name, but also any name which, though not published with any such express indication, has the appearance of being intended to be a substitute name. It is only necessary to pose the question in order also to provide the answer. For a modification of Rule (f) in the sense indicated above would be to import into that Rule precisely that defect which it is the aim of draftsmen to avoid and which the Thirteenth International Congress at Paris in 1948 was at pains, as far as possible, to eradicate from the *Règles*, namely a provision which depends not upon some objective external fact, but on a subjective idea (in this case, an idea as to the intentions of a given author, when publishing a new name) to be formed by a person seeking to apply the provision in question. It is perfectly obvious that no provision that depends on a subjective criterion can ever lead to stability, for it is inevitable that some will apply that criterion in one way and others in the opposite way. It would therefore be a most retrograde step to substitute a subjective, for the present objective, basis for Rule (f) in Article 30.

8. *Question whether any verbal amendment of Rule (f) in Article 30 is desirable for the purpose of eliminating possible misunderstandings as to the meaning of that Rule* : Having now examined the question of the meaning properly applicable to Rule (f) in Article 30 and having concluded also that that meaning is greatly to be preferred to the only meaning that could be substituted for it, we must pause to consider whether any, and, if so, what verbal amendment of Rule (f) is desirable for the purpose of eliminating possible misunderstandings in the future as to the meaning of this Rule. On this question, there will, I think, be general agreement as to the need for a drafting amendment designed

to clarify the meaning of this Rule, in order to save zoologists in future from becoming involved in discussions such as those which have occurred in the past on the question whether the name *Fulgora* Linnaeus, 1767, should be regarded as the name of a genus then independently established by Linnaeus or whether it should be regarded as no more than a substitute name for the earlier name *Laternaria* Linnaeus, 1764, a question which plays an essential part in the application in regard to those names now submitted to the Commission by Mr. R. G. Fennah.²

9. Recommendation submitted : For the reasons set forth in the present note, I recommend that the International Commission on Zoological Nomenclature should render a *Declaration* (1) ruling that Rule (f) in Article 30 is to be interpreted (a) as though the words "expressly published" were inserted after the word "is" in place of the word "proposed", and (b) as though the words "some specified generic name of older date" were substituted for the words "another generic name", and (2) recommending that the foregoing changes be made in Rule (f) in Article 30 by the next International Congress of Zoology.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Mr. Hemming's application, the question of the interpretation of Rule (f) in Article 30 so raised was allotted the Registered Number Z.N.(S.) 539.

3. Publication of the present application : Mr. Hemming's application was sent to the printer in May 1951, concurrently with Mr. Fennah's application in regard to the names *Laternaria* Linnaeus and *Fulgora* Linnaeus, and was published on 28th September 1951 in Part 2 of volume 6 of the *Bulletin of Zoological Nomenclature* (Hemming, 1951, *Bull. zool. Nomencl.* **6** : 45—48).

4. Comment on the present application received from Dr. Ernst Mayr (American Museum of Natural History, New York) : The publication of the present application in the *Bulletin of Zoological Nomenclature* elicited a letter of support from Dr. Ernst Mayr (then of the *American Museum of Natural History, New York*) (Mayr, 1952, *Bull. zool. Nomencl.* **6** : 244).

² See footnote 1.

I wonder whether the Rules should not have a reference to the status of generic names which are clearly substitute names for previously published generic names even though they do not conform with the new interpretation in Rule (f) in Article 30. Such a rule might merely be that all cases be submitted to the Commission. To leave these cases entirely up in the air—as it appears from the new restricted rulings—would seem unfortunate.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

5. Issue of Voting Paper V.P.(52)46 : On 15th May 1952, a Voting Paper (V.P.(52)46) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal “relating to the adoption of a *Declaration* in the terms specified at the foot of the present Voting Paper, as recommended in paragraph 9 at the foot of page 48 of volume 6 of the *Bulletin of Zoological Nomenclature*” [*i.e.* in paragraph 9 of the application reproduced in the first paragraph of the present *Declaration*].

6. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 15th August 1952.

7. Particulars of the Voting on Voting Paper V.P.(52)46 : The state of the voting on Voting Paper V.P.(52)46 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Riley ; Hering ; Calman ; Dymond ; Hankó ; Bonnet ;
Vokes ; do Amaral ; Pearson ; Bradley ; Hemming ;
Esaki ; Lemche ; Cabrera ; Stoll ; Boschma ;

(b) *Negative Votes* :

None ;

(c) *Voting Papers not returned, two (2)* :

Jaczewski ; Mertens.

8. Declaration of Result of Vote : On 16th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)46, signed a Certificate that the Votes cast were as set out in paragraph 7 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

IV.—APPROVAL OF THE PRESENT “DECLARATION”
BY THE FOURTEENTH INTERNATIONAL CONGRESS
OF ZOOLOGY, COPENHAGEN, 1953

9. By the time that the voting on the present *Declaration* was completed, the whole organisation of the Commission was being directed to the preparations for the discussions on zoological nomenclature which were due to take place at Copenhagen in July 1953, first at the Colloquium on Zoological Nomenclature then being organised by the International Trust for Zoological Nomenclature, second, by the International Commission on Zoological Nomenclature, and, finally, by the Fourteenth International Congress of Zoology, both in its Section on Nomenclature and in Plenary Session. It was accordingly decided not to arrange, as would normally have been done, for the immediate publication of the present *Declaration* in the “*Declarations*” Series, but, in place of so doing, to include the subject matter of this *Declaration* as one of the items of the Agenda then being prepared for the Copenhagen meetings.

10. Under the foregoing decision, the question of the interpretation of Rule (f) in Article 30 of the *Règles* raised in the present application was entered as Case No. 42 on the Agenda for the Copenhagen meetings. The document submitted in connection with the foregoing item on the Copenhagen Agenda consisted of a note by the Secretary setting out the proposal submitted to the Commission and the result of the Commission's vote thereon. This document was published on 24th July 1953 in the second of the two volumes of the *Bulletin of Zoological Nomenclature* devoted to the Copenhagen meetings (Hemming, 1953, *Bull. zool. Nomencl.* **10** : 400—401).

11. Case No. 42 on the Copenhagen Agenda was considered at a Joint Meeting between the International Commission on Zoological Nomenclature and the Colloquium on Zoological Nomenclature held in the Meeting Room of the Academic Senate of the University of Copenhagen on Sunday, 2nd August 1953 at 0930 hours. The Joint Meeting concurred in the conclusion already reached by the Commission in this matter and it was agreed that a paragraph to this effect should be inserted in the Report to be submitted by the Colloquium to the Commission. This and other *Declarations* adopted prior to its Copenhagen Session were submitted to the Congress by the Commission in the Report which it adopted at a Meeting held in the University Buildings, Copenhagen, on Monday, 3rd August 1953 at 1810 hours. This Report was approved by the Section on Nomenclature of the Fourteenth International Congress of Zoology at a Meeting held jointly with the International Commission on Zoological Nomenclature, in the University Buildings, Copenhagen, on Wednesday, 12th August 1953 at 0900 hours. The Report so approved was submitted to, and approved and adopted by, the Fourteenth International Congress of Zoology at its Final Plenary Session held on the afternoon of the same day.

12. The text of the decision in the present matter, as adopted by the International Commission on Zoological Nomenclature, and as approved and adopted by the Fourteenth International Congress of Zoology, Copenhagen, 1953, is given at the head of the present *Declaration*. It was included also in the Official

Record of the decisions on zoological nomenclature taken by the foregoing Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 70—71, paragraph 132).

13. The present *Declaration* shall be known as *Declaration Fourteen* (14) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Seventh day of April, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 18. Pp. xxv—xxxvi

DECLARATION 15

Clarification of the question of the nominal species to be regarded as eligible for selection as the type species of a nominal genus established without cited nominal species, in cases where a subsequent author, without citing such a species, gives a bibliographical reference to a work in which such a species is cited

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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN DECLARATION 15

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N. Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N. Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

DECLARATION 15

CLARIFICATION OF THE QUESTION OF THE NOMINAL SPECIES TO BE REGARDED AS ELIGIBLE FOR SELECTION AS THE TYPE SPECIES OF A NOMINAL GENUS ESTABLISHED WITHOUT CITED NOMINAL SPECIES, IN CASES WHERE A SUBSEQUENT AUTHOR, WITHOUT CITING SUCH A SPECIES GIVES A BIBLIOGRAPHICAL REFERENCE TO A WORK IN WHICH SUCH A SPECIES IS CITED

DECLARATION : In the case of a nominal genus established prior to 1st January 1931, with an indication, definition or description but without citation of any nominal species, the citation by a later author in connection with the name of such a genus of a bibliographical reference to a book or paper containing the names of nominal species is not to be treated as constituting a distinct reference of the nominal species concerned to the genus in question, it being necessary for this purpose for an author explicitly to cite by name a nominal species as being referable to the genus in question.

I.—THE STATEMENT OF THE CASE

An application submitted to the Commission by Dr. L. R. Cox (*British Museum (Natural History), London*) in regard to the species to be accepted as the type species of the genus *Trigonia* Bruguière, 1789 (Class Pelecypoda)¹ raised a general issue regarding the interpretation of the provisions in the *Règles* which prescribe what species are to be deemed to be originally included species for a given nominal genus established without citation of nominal species and therefore what species are to be regarded as eligible for selection as the type species of a nominal

¹ See *Opinion* 327 (pp. 283—298 of the present volume).

genus so established. This general question was submitted to the Commission by the Secretary concurrently with the submission of Dr. Cox's application in regard to the name *Trigonia* Bruguière, since a definitive ruling by the Commission on the question of interpretation involved was an indispensable preliminary to the taking of a decision by the Commission on Dr. Cox's application. The following is the text of the application so submitted by Mr. Hemming :—

Suggested adoption of a "Declaration" relative to the nominal species to be regarded as eligible for selection as the type species of a genus established without cited nominal species, in cases where a subsequent author, without citing such a species, gives a bibliographical reference to a work in which such species are cited

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

1. In his application relating to the type species of the genus *Trigonia* Bruguière, 1789 (Class Pelecypoda) Dr. L. R. Cox raises the question whether, in the case of a genus established without cited nominal species, a subsequent author who, while not citing any nominal species as being referable to the genus in question, gives a bibliographical reference to a previously published work or paper in which such species are cited by name is to be treated as having so referred the species in question and therefore as having created a situation in which those nominal species alone rank as originally included species and are accordingly alone eligible for selection as the type species of the genus by a subsequent author, acting under Rule (g) in Article 30.

2. Up to 1948, as Dr. Cox points out, the only ruling available regarding the species to be accepted as the type species of a nominal genus established without nominal species clearly referred thereto was that given in *Opinion* 46 (first published in the year 1912). That *Opinion*, as is well known, caused great difficulty (and much controversy), when attempts were made to apply its provisions in particular cases, owing partly to the mutually contradictory character of its component provisions and partly to the fact that those provisions rested not upon objective nomenclatorial facts but upon subjective (taxonomic) criteria and were therefore incapable of securing a result which would not be open to challenge by later authors holding different subjective (taxonomic) views. Having regard to these well-known defects in *Opinion* 46, the International Commission gave special

consideration to the problem dealt with in it, when in 1948 at its Paris Session, it had under consideration the question of recommending to the International Congress of Zoology the incorporation, subject to any necessary amendments or clarifications, in the *Règles* of the interpretations of individual Articles given in *Opinions* already rendered. The terms of the conclusions reached by the Commission in this matter, which were subsequently endorsed by the Congress, are set forth in the *Official Record of Proceedings* of the Commission at its Paris Session (1950, *Bull. zool. Nomencl.* 4 : 159—160, 346).

3. The central feature of the decision referred to above is that, in the case of a nominal genus established prior to 1st January 1931 (*a*) with an indication, definition or description, (*b*) with no nominal species distinctly referred thereto, the first nominal species (whether one or more in number) to be distinctly referred to the genus by a subsequent author is, or are, to be treated as the sole originally included nominal species. Supplementary decisions flowing automatically from the foregoing decision were (1) that where only one nominal species was distinctly referred to such a genus on the first occasion on which any such species was so referred, that species automatically becomes the type species of that genus by monotypy, and (2) that, where two or more such species were so referred, those nominal species alone are eligible for selection as the type species of the genus by some later author.

4. In the case cited by Dr. Cox, an author (Lamarck), when dealing (1799) with a genus previously established without any nominal species referred to it (*Trigonia* Bruguière, 1789), did not himself cite any nominal species as belonging to the genus in question but did give a bibliographical reference to a previously published paper (Hermann, 1781) in which nominal species had been cited. The question to be considered is whether action such as that described above creates a situation in which a nominal species has been “distinctly” referred to the genus in question. It seems to me that nothing less than the actual citation of the name of a nominal species as the name of a species belonging to the genus in question can properly be regarded as bringing a nominal species within the scope of the Paris decision, for, unless a nominal species is actually cited by name, it cannot be claimed to have been “distinctly” referred to the genus in question. I should accordingly conclude that the citation of a bibliographical reference to a book or paper containing the names of nominal species does not constitute a “distinct” reference of those species to the genus concerned.

5. Having reached this point, it is necessary to consider whether, if the foregoing is the correct interpretation of the decision taken by the Paris Congress, that decision is the one best calculated for the purpose

in view. One of the great difficulties which arose in the application of *Opinion* 46 in individual cases was the constant doubt as to what species were to be regarded as originally included species. It was for the purpose of overcoming this difficulty and of providing a simple and readily applicable rule that in Paris the Commission recommended, and the Congress agreed, that, in the case of a nominal genus established without any species distinctly referred thereto, two criteria must be satisfied before any subsequent author can be accepted as having referred a species or two or more species to the genus in question. These criteria were : (1) that the species concerned must be cited by name (*i.e.* that nominal species must be cited), (2) that those species must be "distinctly referred" to the genus in question. It would certainly be possible to relax the second of these criteria in such a way as to render it permissible to treat as having been distinctly referred to such a genus a nominal species which, although nowhere mentioned by name by the author concerned, was nevertheless so mentioned in some book or paper to which that author gave a bibliographical reference. My own feeling is that this would be a retrograde step. I hold this view for the following reasons. First, it would, I think, be a mistake, now that at last, as the result of the Paris decision, we have got a simple and easily applicable rule, to complicate that rule by admitting, as having been referred to a genus of the kind which we are considering, nominal species which were not in fact mentioned by the author and which it is only possible to infer that the author in question regarded as belonging to the genus, by reason of his having cited a bibliographical reference to a book or paper in which the names of those species appeared. In some cases, no doubt, such an inference would be fully justified, but in others the validity of such an inference might be very doubtful, for an early author—and we are concerned here almost exclusively with early authors—might easily give such a reference for the purpose of drawing attention to (say) some observation made by the author quoted without necessarily intending to refer to the genus with which he was dealing all the nominal species cited by the earlier author. Second, there is always the possibility in such cases that a bibliographical reference so given may be incorrectly cited (as Dr. Cox has shown actually happened in the case of *Trigonia* when in similar circumstances Lamarck in 1801 gave one certainly erroneous bibliographical reference and a second probably erroneous reference). Third, the books or papers to which in such circumstances bibliographical references are likely to be made will in almost every case be old books, mainly books published in the XVIIIth century; descriptions and figures given in such books are, as is well known, often difficult to interpret and in consequence genera having, as their type species, species originally described and/or figured in such works are frequently indeterminate or at best are based upon an insecure foundation.

6. For the foregoing reasons, it seems to me that an undesirable element of instability and consequently of confusion would be introduced into nomenclature if the Paris decision in this matter were to be

relaxed in such a way that a nominal species that is not cited by an author, when dealing with a genus established without any nominal species referred thereto, but is mentioned in a book or paper, to which a bibliographical reference is cited by that author were to be treated as an originally included species. Any hard case that might arise (as in the case of *Trigonia*) by the maintenance of the Paris decision could properly be dealt with under the Commission's Plenary Powers. Such cases would, I am convinced, be much less numerous and the problems at issue much less complicated than would be those which would arise if the reverse procedure were to be adopted. Accordingly, I would suggest that, in order to remove any doubts which may exist in regard to the present position in this matter, the International Commission on Zoological Nomenclature, acting under the procedure prescribed in such cases by the International Congress of Zoology (1950, *Bull. zool. Nomencl.* 4 : 136—137), should render a *Declaration* stating that, in the case of a nominal genus established prior to 1st January 1931, with an indication, definition or description without citation of any nominal species, the citation by a later author in connection with the name of such a genus of a bibliographical reference to a book or paper containing the names of nominal species is not to be treated as constituting a distinct reference of the nominal species concerned to the genus in question, it being necessary for this purpose for an author explicitly to cite by name a nominal species as being referable to the genus in question.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : Dr. Cox's application relating to the name *Trigonia* Bruguière was, at the time of its receipt, allotted the Registered Number Z.N.(S) 499, and, when it was decided, concurrently with the submission of that application, to seek a *Declaration* from the Commission on the question of the interpretation of Article 30 involved in Dr. Cox's application, this latter problem was for a time dealt with under the same Registered Number. Later, however, it was judged that it would be more convenient to treat these questions as constituting distinct applications. Under this decision the problem involved by the name *Trigonia* Bruguière continued

to be dealt with under the foregoing Registered Number, while the associated problem of the interpretation of Article 30 was allotted the new Registered Number Z.N.(S.) 734.

3. Publication of the present application : Mr. Hemming's application for a *Declaration* on the question of interpretation discussed above was sent to the printer in March 1951, concurrently with Dr. Cox's application in regard to the name *Trigonia Bruguière*, and was published on 28th September 1951 in Part 3 of volume 6 of the *Bulletin of Zoological Nomenclature* (Hemming, 1951, *Bull. zool. Nomencl.* **6** : 85—88).

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

4. Issue of Voting Paper V.P.(52)52 : On 22nd May 1952, a Voting Paper (V.P.(52)52) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the adoption of a *Declaration* in the terms set out in the third to the tenth lines on page 88 of volume 6 of the *Bulletin of Zoological Nomenclature*" [*i.e.* at the end of paragraph 6 of the application reproduced in the first paragraph of the present *Declaration*].

5. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August 1952.

6. Particulars of the Voting on Voting Paper V.P.(52)52 : The state of the voting on Voting Paper V.P.(52)52 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received) :*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ;
Vokes ; Pearson ; Bradley ; do Amaral ; Hemming ;
Esaki ; Riley ; Lemche ; Stoll ; Boschma ;

(b) *Negative Votes* :

None ;

(c) *Voting Papers not returned, three (3)* ;

Cabrera²; Jaczewski ; Mertens.

7. Declaration of Result of Vote : On 23rd August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)52, signed a Certificate that the Votes cast were as set out in paragraph 6 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

IV.—APPROVAL OF THE PRESENT “DECLARATION”
BY THE FOURTEENTH INTERNATIONAL CONGRESS
OF ZOOLOGY, COPENHAGEN, 1953

8. At the time that the Voting on the present *Declaration* was completed, the whole organisation of the Commission was being directed to the preparations for the discussions on zoological nomenclature which were due to take place at Copenhagen in July 1953, first, at the Colloquium on Zoological Nomenclature then being organised by the International Trust for Zoological Nomenclature, second, by the International Commission on Zoological Nomenclature, and, finally, by the Fourteenth International Congress of Zoology, both in its Section on Nomenclature and in Plenary Session. It was accordingly decided not to arrange, as would normally have been done, for

² After the close of the Prescribed Voting Period an affirmative Vote was received (1st September 1952) from Commissioner Cabrera.

the immediate publication of the present *Declaration* in the "Declarations" Series, but, in place of so doing, to include the subject matter of this *Declaration* as one of the items of the Agenda then being prepared for the Copenhagen meetings.

9. Under the foregoing decision, the question of the interpretation of the provisions in Article 30 relating to the question of the nominal species to be treated as originally included species for a nominal genus established without citation of such species was entered as Case No. 39 on the Agenda for the Copenhagen meetings. The document submitted in connection with the foregoing item on the Copenhagen Agenda consisted of a note by the Secretary setting out the proposal submitted to the Commission and the result of the Commission's vote thereon. This document was published on 24th July 1953 in the second of the two volumes of the *Bulletin of Zoological Nomenclature* devoted to the Copenhagen meetings (Hemming, 1953, *Bull. zool. Nomencl.* **10** : 392—393).

10. Case No. 39 on the Copenhagen Agenda was considered at a Joint Meeting between the International Commission on Zoological Nomenclature and the Colloquium on Zoological Nomenclature held in the Meeting Room of the Academic Senate of the University of Copenhagen on Sunday, 2nd August 1953 at 0930 hours. The Joint Meeting concurred in the conclusion already reached by the Commission in this matter and it was agreed that a paragraph to this effect should be inserted in the Report to be submitted by the Colloquium to the Commission. This and other *Declarations* adopted prior to its Copenhagen Session were submitted to the Congress by the Commission in the Report which it adopted at a Meeting held in the University Buildings, Copenhagen on Monday, 3rd August 1953 at 1810 hours. This Report was approved by the Section on Nomenclature of the Fourteenth International Congress of Zoology at a Meeting held jointly with the International Commission on Zoological Nomenclature, in the University Buildings, Copenhagen, on Wednesday, 12th August 1953 at 0900 hours. The Report so approved was submitted to, and approved and adopted by, the Fourteenth International Congress of Zoology at its Final Plenary Session held on the afternoon of the same day.

11. The text of the decision in the present matter, as adopted by the International Commission on Zoological Nomenclature, and as approved and adopted by the Fourteenth International Congress of Zoology, Copenhagen, 1953, is given at the head of the present *Declaration*. It was included also in the Official Record of the decisions on zoological nomenclature taken by the foregoing Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 67—68, paragraph 126).

12. The present *Declaration* shall be known as *Declaration Fifteen (15)* of the International Commission on Zoological Nomenclature.

DONE in London, this Ninth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

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DECLARATION 16

Clarification of the question of the availability of a name
having as its only "indication" a qualified synonymic
reference to a previously published name



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Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

DECLARATION 16

CLARIFICATION OF THE QUESTION OF THE AVAILABILITY OF A NAME HAVING AS ITS ONLY "INDICATION" A QUALIFIED SYNONYMIC REFERENCE TO A PREVIOUSLY PUBLISHED NAME

DECLARATION: (1) A generic name published without citation of included nominal species and without descriptive matter of any kind, except a qualified (*i.e.* doubtful or provisional) synonymic reference to an older generic name which had been validly published with an indication, definition or description is to be treated as having been published without an "indication" for the purposes of Proviso (a) to Article 25.

(2) A specific name published without descriptive matter of any kind, except a qualified synonymic reference to an older specific name that had been validly published with an indication, definition or description is to be treated as having been published without an "indication" for the purposes of Proviso (a) to Article 25.

(3) A generic name or a specific name so published is to be treated as a *nomen nudum* possessing no status in zoological nomenclature.

I.—THE STATEMENT OF THE CASE

An application¹ submitted to the Commission jointly by Dr. Angus M. Woodbury (*University of Utah, Salt Lake City, Utah, U.S.A.*) and Dr. Hobart M. Smith (*University of Illinois, Urbana, Illinois, U.S.A.*) in regard to the subspecific name properly applicable to the Yellow Rattlesnake of the Colorado River Basin raised, *inter alia*¹, a general issue regarding the interpretation of Proviso (a) to Article 25 of the *Règles*. A decision on this general issue was an indispensable preliminary to the taking of a decision by the Commission on the particular case submitted by Dr. Woodbury and Dr. Hobart Smith. It was accordingly arranged that the Secretary should submit a request to the Commission for a *Declaration* on the foregoing question at the same time that the application relating to the rattlesnake referred to above was laid before that body. The following is the text of the application so submitted by Mr. Hemming :—

Suggested adoption by the International Commission on Zoological Nomenclature of a "Declaration" clarifying the question of the availability of a trivial name having as its only "indication" a qualified reference to a previously published trivial name

By FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

1. The application as originally submitted to the International Commission on Zoological Nomenclature by Dr. Angus M. Woodbury and Dr. Hobart M. Smith (*University of Illinois, Urbana, Ill.*) asking for a ruling on the question of the oldest available trivial name for the race of yellow rattlesnakes of the Colorado River Basin raised a question of principle which, under the decisions regarding procedure taken by the Thirteenth International Congress of Zoology, Paris, 1948 (see 1950, *Bull. zool. Nomencl.* 4 : 136—137) can be resolved by the Commission only by the adoption of a *Declaration* formally interpreting the provision of the *Règles* in question, the series "*Opinions*" being now reserved for decisions on individual nomenclatorial questions not involving any novel interpretation of the *Règles*.

2. *The question of principle at issue:* The question of principle raised by Dr. Angus M. Woodbury and Dr. Hobart M. Smith may be stated shortly as follows : Where a trivial name is published without any descriptive matter of any kind, the sole "indication" given being that the name in question is doubtfully or provisionally synonym-

¹ See paragraph 3 of the present *Opinion*.

ized with another trivial name that has been duly published with a "description, definition or indication", is the trivial name so published (1) to be treated as having been published with an indication in virtue of the qualified synonymy given by its original author, or (2) is the name in question to be treated as having been published without an "indication" and therefore as a *nomen nudum*?

3. *Restriction of question to status of trivial names published as questionable synonyms before 1st January, 1931*: The provisions in Article 25 relating to what constitutes an "indication" for specific trivial names (either names for new species or substitute names to replace invalid specific trivial names) were (as is well known) considerably tightened up, with effect from 31st December, 1930/1st January 1931, by the Tenth International Congress of Zoology, Budapest, 1927, by which a new proviso (Proviso (c)) was added to Article 25. Experience showed that this new proviso was in certain respects unduly restrictive in character, and, on the recommendation of the International Commission, the terms of this proviso were relaxed in various ways by the Thirteenth International Congress of Zoology in Paris in 1948. Neither under the Budapest Proviso nor under the modification of that Proviso, approved by the Paris Congress (see 1950, *Bull. zool. Nomencl.* 4 : 68—71) could a trivial name possessing, as its sole "indication", a qualified (*i.e.*, a doubtful or provisional) synonymization with a previously published trivial name be regarded as having been published with an "indication". Thus, any trivial name published in the foregoing manner *on or after 1st January 1931* is invalid (because it was published without an "indication") and accordingly possesses the status only of a *nomen nudum*. The question of principle upon which an answer is required in the light of Dr. Angus M. Woodbury and Dr. Hobart M. Smith's application is therefore confined to trivial names published *on or before 31st December 1930*.

4. *Relevance of Article 31 of the "Règles" to the status of a trivial name published on or before 31st December, 1930, having as its sole "indication" a qualified synonymic reference to a previously published trivial name*. It is important at this point to recall that at their meetings held in Paris, in 1948, both the International Commission and the International Congress gave special consideration to Article 31 of the *Règles*, the Article which prescribes the manner in which, on the analogy of Article 30 (which provides means for ascertaining the type species of a genus), the type specimen of a species is to be determined. It was agreed on all hands that the text of Article 31, as it existed at the time of the opening of the Paris Congress, was inadequate and obscure and it was for this reason that great attention was given to the devising of a revised text which would be both comprehensive in scope and clear in meaning. The recommendations agreed upon by the International Commission and subsequently approved by the Congress are recorded in the 11th Conclusion of the 4th Meeting of the International Commission during its Paris Session (see 1950,

Bull. zool. Nomencl. 4 : 73—76). As will be seen by reference to the foregoing Conclusion, the purpose of the amendment of Article 31, so undertaken, was to set out in express terms the provisions relating to the determination of the identity of the taxonomic species represented by a given nominal species previously prescribed only obliquely by reference to the not altogether comparable provisions in Article 30. Under the reformed Article 31 provision is made for the selection, where no one specimen was originally designated or indicated as the holotype, of one of the original specimens (i.e., one of the syntypes) to be the lectotype of the species concerned, or, in certain circumstances, of a figure, illustration or previously published description cited in the original description of the nominal species concerned, to represent the lectotype. Article 31, as so revised, now contains an express provision (as the earlier text included by inference) for the exclusion of specimens, figures, illustrations and descriptions of certain categories from eligibility for selection either to be, or to represent, the lectotype of the species in question (provision analogous to Rule (e) in Article 30). This provision in Article 31 will be found in Conclusion 11 (2) (d) at the top of page 76 in vol. 4 of the *Bulletin*. This provision expressly excludes from eligibility for selection (i) to be, or (ii) to represent, the lectotype of a nominal species, a "specimen, illustration, figure, or description" that was "only doubtfully referred to the nominal species by its original author".²

5. *A trivial name published without any descriptive matter, other than a qualified synonymic reference, invalid, because published without an "indication"*: When we apply the provision set forth above to the case of a trivial name published without any descriptive matter other than a qualified synonymic reference, we see at once that there is no means of providing for a nominal species so named a description (or reference) to represent the lectotype of that nominal species, for the sole reference given by the original author was given in a manner which excludes it from eligibility to be selected to represent the lectotype. In other words there is no means by which such a nominal species can be identified, for its name was published without an "indication" and is therefore an invalid *nomen nudum*.

6. *Procedure recommended*: Since (as we have seen) a decision in the form of an interpretative *Declaration* in regard to the status of a trivial name, which, when first published, was accompanied only by a qualified synonymic reference, is expressly asked for in the application by Dr. Angus M. Woodbury and Dr. Hobart M. Smith, it is suggested that, in the light of the considerations set forth in paragraphs 4 and 5

² Further drafting amendments were made in Article 31 by the Fourteenth International Congress of Zoology, Copenhagen, 1953 (1953, *Copenhagen Decisions zool. Nomencl.* : 72—75, Decisions 136—141), but these did not in any way alter the meaning of this Article in relation to the matter here discussed.

above, the International Commission on Zoological Nomenclature should render a *Declaration* in the terms set out below :—

Suggested “ Declaration ”

A trivial name published without descriptive matter of any kind, except a qualified (i.e. doubtful or provisional) synonymic reference to an older trivial name that had been validly published with an indication, definition or description, is to be treated as having been published without an “ indication ” for the purposes of Proviso (a) to Article 25. A trivial name so published is to be treated as a *nomen nudum*, possessing no status in zoological nomenclature.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : In the initial stages of its consideration the question which forms the subject of the present *Declaration* was dealt with jointly with the application regarding the subspecific name applicable to the Yellow Rattlesnake of the Colorado River Basin submitted by Dr. Woodbury and Dr. Hobart Smith. Accordingly, during that stage this problem bore the Registered Number Z.N.(S.) 176. Later, however, it was agreed between the applicants and the Secretary that the question of principle which forms the subject of the present *Declaration* should be treated as constituting a separate application. The problem involved was thereupon registered separately under the Number Z.N.(S.) 349.

3. Publication of the present application : Mr. Hemming’s application for a *Declaration* on the question of interpretation discussed above was sent to the printer in January 1951, but, owing to uncertainties regarding the procedure to be adopted for dealing with the other question of principle raised in the Woodbury/Smith application (Z.N.(S.) 176) (namely, the question of the availability of specific names published in specific synonymies without independent indications³, the publication both of

³ For the decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, see the Official Record of the decisions on zoological nomenclature taken by that Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 63—64, Decision 115).

the foregoing application and of the application on which the present *Declaration* is based was temporarily postponed. Ultimately, it was decided that the best course would be to publish these applications without further delay in order to permit of a decision being taken by the Commission on the proposed *Declaration* in sufficient time to permit of that *Declaration* being submitted to the Fourteenth International Congress of Zoology at Copenhagen in August 1953. Under this decision these two applications were accordingly included in Part 4 of volume 6 of the *Bulletin of Zoological Nomenclature*, which was published on 28th September 1951 (Woodbury & Smith⁴, 1951, *Bull. zool. Nomencl.* 6 : 99—100 ; Hemming, 1951, *ibid.* 6 : 103—105). The publication of the second of these applications elicited no objection to the adoption of a *Declaration* in the sense proposed.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

4. Issue of Voting Paper V.P.(52)54 : On 22nd May 1952, a Voting Paper (V.P.(52)54) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal “relating to the adoption of a *Declaration* in the terms set out in the concluding portion of paragraph 6 on page 105 of volume 6 of the *Bulletin of Zoological Nomenclature*” [i.e. in paragraph 6 of the application reproduced in the first paragraph of the present *Declaration*].

5. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August 1952.

⁴ The decision since taken on the Woodbury/Smith application regarding the name to be used for the Yellow Rattlesnake of the Colorado River Basin has since been embodied in *Opinion* 339 (now in the press).

6. Particulars of the Voting on Voting Paper V.P.(52)54 :

The state of the voting on Voting Paper V.P.(52)54 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received):*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ; Vokes ;
Bradley ; do Amaral ; Hemming ; Esaki ; Riley ;
Lemche ; Mertens ; Pearson ; Stoll ; Boschma ;

(b) *Negative Votes:*

None ;

(c) *Voting Papers not returned, two (2):*

Cabrera⁵; Jaczewski.

7. Declaration of Result of Vote : On 23rd August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)54, signed a Certificate that the Votes cast were as set out in paragraph 6 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

IV. APPROVAL OF THE PRESENT " DECLARATION "
BY THE FOURTEENTH INTERNATIONAL
CONGRESS OF ZOOLOGY, COPENHAGEN,
1953

8. At the time that the Voting on the present *Declaration* was completed, the whole organisation of the Commission was being directed to the preparations for the discussions on zoological nomenclature which were due to take place at Copenhagen in July 1953, first, at the Colloquium on Zoological Nomenclature

⁵ After the close of the Prescribed Voting Period an affirmative Vote was received (on 1st September 1952) from Commissioner Cabrera.

then being organised by the International Trust for Zoological Nomenclature, second, by the International Commission on Zoological Nomenclature, and, finally, by the Fourteenth International Congress of Zoology, both in its Section on Nomenclature and in Plenary Session. It was accordingly decided not to arrange, as would normally have been done, for the immediate publication of the present *Declaration* in the “*Declarations*” Series, but, in place of so doing, to include the subject matter of this *Declaration* as one of the items of the Agenda then being prepared for the Copenhagen meetings.

9. Under the foregoing decision, the question of the interpretation of the provisions in Article 25 relating to the status of specific names having as an indication only a qualified synonymic reference to a previously published specific name was entered as Case No. 37 on the Agenda for the Copenhagen meetings. The document submitted in connection with the foregoing item on the Copenhagen Agenda consisted of a note by the Secretary setting out the proposal submitted to the Commission and the result of the Commission's vote thereon. This document was published on 23rd July 1953 in the second of the two volumes of the *Bulletin of Zoological Nomenclature* devoted to the Copenhagen meetings (Hemming, 1953, *Bull. zool. Nomencl.* **10** : 374—375).

10. Case No. 37 on the Copenhagen Agenda was considered at a Joint Meeting between the International Commission on Zoological Nomenclature and the Colloquium on Zoological Nomenclature held in the Meeting Room of the Academic Senate of the University of Copenhagen on Saturday, 1st August 1953 at 1745 hours. The Joint Meeting concurred in the conclusion already reached by the Commission⁶ in this matter but agreed to

⁶ In the application submitted in the present case the expression “trivial name” was used, as then required by the *Règles*, to denote the second portion of the name of a species, the binominal combination of which such a name was composed being then termed the “specific name” of the species. It was decided by the Copenhagen Congress (1) to substitute the expression “specific name” for the expression “trivial name” and (2) to employ, as and when appropriate, the expression “binomen” in place of the expression “specific name” for the binominal combination of which the name of a species consists. These changes in terminology were introduced into the decision taken at Copenhagen in the present case and have been incorporated also in the present *Declaration*.

recommend that the interpretation given in this matter should be amplified by the inclusion of a paragraph similarly defining the status of a generic name based only upon a qualified synonymic reference. It was thereupon agreed that a paragraph embodying the foregoing amendment should be inserted in the Report to be submitted by the Colloquium to the Commission. This and other *Declarations* adopted prior to its Copenhagen Session were submitted to the Congress by the Commission in the Report which it adopted at a Meeting held in the University Buildings, Copenhagen, on Monday, 3rd August 1953 at 1810 hours. This Report was approved by the Section on Nomenclature of the Fourteenth International Congress of Zoology at a Meeting held jointly with the International Commission on Zoological Nomenclature, in the University Buildings, Copenhagen, on Wednesday, 12th August 1953 at 0900 hours. The Report so approved was submitted to, and approved and adopted by, the Fourteenth International Congress of Zoology at its Final Plenary Session held on the afternoon of the same day.

11. The text of the decision in the present matter, as adopted by the International Commission on Zoological Nomenclature, and as approved and adopted by the Fourteenth International Congress of Zoology, Copenhagen, 1953, is given at the head of the present *Declaration*. It was included also in the Official Record of the decisions on zoological nomenclature taken by the foregoing Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 66, Decision 122).

12. The present *Declaration* shall be known as *Declaration Sixteen (16)* of the International Commission on Zoological Nomenclature.

DONE in London, this Tenth day of May, Nineteen Hundred and Fifty-four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

VOLUME 9. Part 22. Pp. xlix—lx

DECLARATION 17

Clarification of the provision in the *Règles* relating to the conditions necessary to establish a state of secondary homonymy between any two specific names



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN DECLARATION 17

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England.*)

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil.*)

Secretary : Mr. Francis Hemming (*London, England.*)

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology.*)

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

DECLARATION 17

CLARIFICATION OF THE PROVISION IN THE "RÈGLES" RELATING TO THE CONDI- TIONS NECESSARY TO ESTABLISH A STATE OF SECONDARY HOMONYMY BETWEEN ANY TWO SPECIFIC NAMES

DECLARATION :—For the purposes of the provision in the *Règles* relating to the rejection of secondary homonyms, an author rejecting one name as a junior secondary homonym of another name is required to make it clear that he considers that the species bearing the specific name so rejected is congeneric with a species bearing a previously published identical specific name, but is free to indicate his view on this subject in whatever way he considers appropriate, provided that the method so adopted leaves no reasonable doubt that he considers that the two species concerned are congeneric with one another.

I.—THE STATEMENT OF THE CASE

On 28th July 1951, Mr. Francis Hemming, as Secretary, submitted an application to the Commission asking for a *Declaration* clarifying the provision in the *Règles* relating to the conditions necessary to establish a state of secondary homonymy between any two specific names. A decision on this question was an indispensable preliminary to the taking of a decision by the Commission on the question of the correct specific name for the Kidney Worm of Swine, on which an application had previously been submitted by Dr. Ellsworth C. Dougherty (*University of*

California, Berkeley, California, U.S.A.) (1951, *Bull. zool. Nomencl.* 2 : 282—291)¹. The application for a *Declaration* on the question of interpretation involved in Dr. Dougherty's application, so submitted by Mr. Hemming, was as follows :—

On the question whether it is desirable that words should be added to the "Règles" expressly providing that for the purposes of establishing a condition of secondary homonymy between two specific names it is not necessary that an author should expressly cite the names in homonymous combinations before rejecting and replacing the later published of the two trivial names involved

By FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

1. In an application (Z.N.(S.) 188) relating to the question of the correct trivial name of the Kidney Worm of Swine (1951, *Bull. zool. Nomencl.* 2 : 282—291), Dr. Ellsworth C. Dougherty alludes to, and rejects, the argument which, prior to the revision of the provisions (Articles 35 and 36) of the *Règles* relating to specific homonymy, was sometimes advanced to the effect that, in order to establish a condition of secondary homonymy, it is not sufficient that an author should place in a single genus two species, each having the same word as its trivial name, and should reject and replace the later published of the two trivial names in question. According to the argument referred to by Dr. Dougherty, it is—or should be—necessary for such an author actually to apply to each of the two species concerned the same homonymous specific name (combination of generic name and specific trivial name) as a preliminary to the rejection of the later published trivial name on grounds of secondary homonymy and to its replacement by some other trivial name applicable, either objectively or subjectively, to the species bearing the invalid trivial name so rejected. It will be appreciated that the object of the argument described above

¹ Following the adoption by the Commission of a decision on the question of principle dealt with in the present *Declaration*, it was possible to proceed with the consideration of Dr. Dougherty's application regarding the correct name of the Kidney Worm of Swine (File Z.N.(S.) 188). A Voting Paper (V.P.(54)12) on this subject was issued to the Members of the Commission on 27th February 1954. The decision taken by the Commission in this matter has since been embodied in *Opinion* 340 (now in the press).

is to provide a justification for the revival of a trivial name that formed part of a specific name which had at one time been rejected as a secondary homonym, in cases where (as has almost invariably been the case) the author rejecting the trivial name in question did not, in so doing, apply the special procedure described above. In other words, the object of this argument is to provide a legal means for avoiding giving effect to the provision that a name, once rejected on grounds of homonymy, is to be regarded as having been permanently so rejected and accordingly as incapable of being brought back into use by any later author who may himself hold the taxonomic (and therefore subjective) view that the two species concerned are not congeneric with one another.

2. In a supplementary note to Dr. Dougherty's application (1950, *Bull. zool. Nomencl.* 2 : 291—293) I appealed to interested specialists to inform the International Commission on Zoological Nomenclature whether, in their opinion, the replacement of the trivial name *dentatus* Diesing, 1839, by the trivial name *pinguicola* Verrill, 1870, as the trivial name of the Kidney Worm of Swine would be likely to give rise to confusion, and, in doing so, I commented (: 292) on the contention regarding the Law of Homonymy as applied to secondary homonyms set out above. I recalled that, when at Paris in 1948 the Law of Homonymy was subjected to careful and prolonged consideration (1950, *Bull. zool. Nomencl.* 4 : 97—105, 107—125) no voice was raised in favour of the incorporation in Articles 35 and 36 of a special limiting provision of the kind referred to above. As I there pointed out : “Not only was no such argument advanced, but, on the contrary, the view was strongly expressed that great care must be taken in the revision of Article 35 to avoid the inclusion of formal provisions of a ‘ritualistic’ character of the kind which (as had previously been pointed out by Dr. J. Brookes Knight (*Smithsonian Institution, Washington, D.C.*) had marred the amendment to Article 25 made by the Tenth International Congress of Zoology at Budapest in 1927. For this reason therefore it was expressly agreed that no definition of the procedure to be adopted by an author in rejecting one name as a secondary homonym of another should be inserted in the new rule”.

3. In my view, the criticism of the Budapest amendment of Article 25 advanced by Dr. Brookes Knight is well founded and the Paris Congress (and the International Commission as its adviser) took the only right decision in insisting upon the omission from the revised version of the Law of Homonymy of “ritualistic” provisions. In the particular case under consideration the insertion of a provision such as that discussed in paragraph 1 of the present note would not only have complicated and rendered less effective the provisions relating to secondary homonymy as regards all future cases but also, as regards rejections of names as secondary homonyms made prior to the introduction of the new rules, would have rendered virtually inoperative

the provision which occupies the central position in Article 36 (as also in the Paris revision), namely that a name once rejected as a homonym is to be permanently rejected and therefore to be incapable of being brought back into use at some later date by specialists who take a different view as to the generic relationship to one another of the two species concerned, from the view on this subject taken by the author rejecting the name of one of those species as a secondary homonym of the name of the other. It is evident therefore that, so long as it is the general wish of zoologists to maintain in the *Règles* the foregoing cardinal principle, it would be entirely inappropriate to include in the *Règles* a provision of the kind described in paragraph 1 above, for such a provision would be open to strong objection both on general grounds because of its "ritualistic" character but also on the specific ground that it would largely stultify the provision that a rejected homonym is never to be brought back into use, by very greatly restricting the number of cases where, for the purposes of the *Règles*, as contrasted with actual fact, one name had been rejected as a secondary homonym of another.

4. In general, it is, as is well known, a sign of bad drafting for a code, in addition to including provisions defining how a given condition or process (in this instance, the condition of secondary homonymy and the process of rejecting secondary homonyms) is to be recognised or effected, to include also provisions specifying one or more conditions or processes which do not comply with the substantive provision laid down. In the case of the rules of zoological nomenclature, such considerations may perhaps be of less force than in cases where any question of interpretation which may arise is subjected to expert scrutiny by persons trained in interpretative technique, whereas the object of the *Règles* must be to provide clear guidance to persons whose special expertise lies in other fields. For this reason it may be felt that, notwithstanding the general objection to which negative, as contrasted with positive, provisions must always be open, it would be to the general convenience that the International Commission on Zoological Nomenclature should render a "*Declaration*" stating that : "For the purposes of the provision relating to the rejection of secondary homonyms, an author rejecting one name as a secondary homonym of another name is required to make it clear that he considers that the species bearing the trivial name so rejected is congeneric with another species bearing a previously published identical trivial name but is free to indicate his view on this subject in whatever way he may consider appropriate, provided that the method so adopted leaves no reasonable doubt that he considers the two species concerned to be congeneric with one another".

5. It would be of assistance to the International Commission on Zoological Nomenclature if any specialist interested in the problems raised by the Law of Homonymy would be so good as to send to the Secretary to the Commission (address : 28 Park Village East, Regent's

Park, N.W.1, London, England) a statement of his views on the issue raised in the present note for consideration by the International Commission.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Mr. Hemming's application, the question of the clarification of the provisions in the *Règles* relating to secondary homonymy so submitted was allotted the Registered Number Z.N.(S.) 586.

3. Publication of the present application : The present application, being an application relating to the interpretation of the *Règles* on which it was desirable that a *Declaration* should be adopted by the Commission in sufficient time for it to be submitted to the Fourteenth International Congress of Zoology, Copenhagen, 1953, was treated as requiring special priority, and it was accordingly sent to the printer in August 1951 about a week after it had been received. Publication took place on 28th September 1951 in Part 4 of volume 6 of the *Bulletin of Zoological Nomenclature* (Hemming, 1951, *Bull. zool. Nomencl.* **6** : 120—122). The publication of this application elicited no objection to the adoption of a *Declaration* in the sense proposed.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

4. Issue of Voting Paper V.P.(52)58 : On 22nd May 1952, a Voting Paper (V.P.(52)58) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the adoption of a *Declaration* in the terms suggested at the end of paragraph 4 (last eight lines) on

page 122 of volume 6 of the *Bulletin of Zoological Nomenclature*” [*i.e.* at the end of paragraph 4 of the application reproduced in the first paragraph of the present *Declaration*].

5. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August 1952.

6. Particulars of the Voting on Voting Paper V.P.(52)58 : The state of the voting on Voting Paper V.P.(52)58 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received):*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ; Vokes ;
Bradley ; do Amaral ; Hemming ; Esaki ; Riley ;
Lemche ; Pearson ; Stoll ; Boschma ;

(b) *Negative Votes:*

None ;

(c) *Voting Papers not returned, three (3):*

Cabrera²; Jaczewski ; Mertens.

7. Declaration of Result of Vote : On 23rd August 1952, Mr. Hemming, Secretary to the International Commission,

² After the close of the Prescribed Voting Period an affirmative Vote was received (on 1st September 1952) from Commissioner Cabrera.

acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)58, signed a Certificate that the Votes cast were as set out in paragraph 6 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

IV.—APPROVAL OF THE PRESENT “DECLARATION”
BY THE FOURTEENTH INTERNATIONAL
CONGRESS OF ZOOLOGY, COPENHAGEN,
1953

8. At the time that the Voting on the present *Declaration* was completed, the whole organisation of the Commission was being directed to the preparations for the discussions on zoological nomenclature which were due to take place at Copenhagen in July 1953, first, at the Colloquium on Zoological Nomenclature then being organised by the International Trust for Zoological Nomenclature, second, by the International Commission on Zoological Nomenclature, and, finally, by the Fourteenth International Congress of Zoology, both in its Section on Nomenclature and in Plenary Session. It was accordingly decided not to arrange, as would normally have been done, for the immediate publication of the present *Declaration* in the “*Declarations*” Series, but, in place of so doing, to include the subject matter of this *Declaration* as one of the items of the Agenda then being prepared for the Copenhagen meetings.

9. Under the foregoing decision, the question of the interpretation of the provisions in the *Règles* relating to the rejection of the names of species on the ground of secondary homonymy was entered as Case No. 55 on the Agenda for the Copenhagen meetings. The document submitted in connection with the foregoing item consisted of a note by the Secretary setting out the

proposal submitted to the Commission and the result of the Commission's vote thereon. This document was published on 24th July 1953 in the second of the two volumes of the *Bulletin of Zoological Nomenclature* devoted to the Copenhagen meetings (Hemming, 1953, *Bull. zool. Nomencl.* **10** : 432—433).

10. Case No. 55 on the Copenhagen Agenda was considered at a Joint Meeting between the International Commission on Zoological Nomenclature and the Colloquium on Zoological Nomenclature held in the Meeting Room of the Academic Senate of the University of Copenhagen on Sunday, 2nd August 1953 at 0930 hours. The Joint Meeting concurred in the conclusion already reached by the Commission³ and it was agreed that a paragraph to this effect should be inserted in the Report to be submitted by the Colloquium to the Commission. This and other *Declarations* adopted prior to its Copenhagen Session were submitted to the Congress by the Commission in the Report which it adopted at a Meeting held in the University Buildings, Copenhagen, on Monday, 3rd August 1953 at 1810 hours. This Report was approved by the Section on Nomenclature of the Fourteenth International Congress of Zoology at a Meeting held jointly with the International Commission on Zoological Nomenclature in the University Buildings, Copenhagen, on Wednesday, 12th August 1953 at 0900 hours. The Report so approved was submitted to, and approved and adopted, by the Fourteenth International Congress of Zoology at its Final Plenary Session held on the afternoon of the same day.

11. The text of the decision in the present matter, as adopted by the International Commission on Zoological Nomenclature, and as approved and adopted by the Fourteenth International

³ In the application submitted in the present case the expression "trivial name" was used, as then required by the *Règles*, to denote the second portion of the name of a species, the binominal combination of which such a name was composed being then termed the "specific name" of the species. It was decided by the Copenhagen Congress (1) to substitute the expression "specific name" for the expression "trivial name" and (2) to employ, as and when appropriate, the expression "binomen" in place of the expression "specific name" for the binominal combination of which the name of a species consists. These changes in terminology were introduced into the decision taken at Copenhagen in the present case and have been incorporated also in the present *Declaration*.

Congress of Zoology, Copenhagen, 1953, is given at the head of the present *Declaration*. It was included also in the Official Record of the decisions on zoological nomenclature taken by the foregoing Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 82, Decision 161).

12. The present *Declaration* shall be known as *Declaration Seventeen (17)* of the International Commission on Zoological Nomenclature.

DONE in London, this Twelfth day of May, Nineteen Hundred and Fifty-four.

*Secretary to the International Commission
on Zoological Nomenclature*

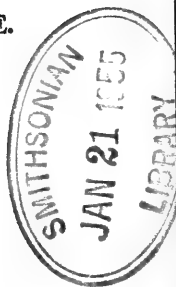
FRANCIS HEMMING

OPINIONS AND DECLARATIONS
RENDERED BY THE INTER-
NATIONAL COMMISSION ON
ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

VOLUME 9. Part 1. Pp. 1—60



OPINION 312

Validation, under the Plenary Powers, of the name *Amoeba coli* as from Grassi, 1879, to be the name for the large non-dysenteric amoeba of Man and the designation of that species to be the type species of the genus *Entamoeba* Casagrandi & Barbagallo, 1895, and designation under the same powers of the name *Entamoeba histolytica* Schaudinn, 1903, to be the name for the dysenteric amoeba of Man (Class Rhizopoda) (*Opinion* substituted for *Opinion* 99)

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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 312

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 312

VALIDATION, UNDER THE PLENARY POWERS OF THE NAME "AMOEBA COLI" AS FROM GRASSI, 1879, TO BE THE NAME FOR THE LARGE NON-DYSENTERIC AMOEBA OF MAN AND DESIGNATION OF THAT SPECIES TO BE THE TYPE SPECIES OF THE GENUS "ENTAMOEBA" CASAGRANDE & BARBAGALLO, 1895, AND DESIGNATION UNDER THE SAME POWERS OF THE NAME "ENTAMOEBA HISTOLYTICA" SCHAUDINN, 1903, TO BE THE NAME FOR THE DYSENTERIC AMOEBA OF MAN (CLASS RHIZOPODA) ("OPINION" SUBSTITUTED FOR "OPINION" 99)

RULING :—(1) The Ruling given in *Opinion* 99 is hereby cancelled as being incorrect and misleading, and that *Opinion* is revoked for all except historical purposes.

(2) The following action is hereby taken under the Plenary Powers :—

- (a) The specific name *coli* Lösch, 1875, as published in the combination *Amoeba coli*, is hereby suppressed for the purposes both of the Law of Priority and of the Law of Homonymy.
- (b) The under-mentioned specific names are hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy :—
 - (i) *urogenitalis* Baelz, 1883, as published in the combination *Amoeba urogenitalis* ;
 - (ii) *vaginalis* Blanchard, 1885, as published in the combination *Amoeba vaginalis* ;
 - (iii) *intestinalis* Blanchard, 1885, as published in the combination *Amoeba intestinalis* ;
 - (iv) *dysenterica* Pfeiffer, 1888, as published in the combination *Amoeba dysenterica* ;
 - (v) *dysenteriae* Councilman & Lafleur, 1891, as published in the combination *Amoeba dysenteriae* ;

- (c) It is hereby directed that the specific name *histolytica* Schaudinn, 1903, as published in the combination *Entamoeba histolytica*, is to be applied to the dysenteric amoeba of Man described and figured by Dobell (C.C.), 1919, *The Amoebae living in Man* : 31—70, pl. I, figs. 1—6 ; pl. II, fig. 16 ; pl. III ; pl. IV, figs. 70—76.
- (d) It is hereby directed that the binomen *Amoeba coli*, as published by Grassi in 1879, is to be treated as being a scientific name (binominal combination) then published for the first time, and the specific name *coli* Grassi, 1879, so published is hereby validated.
- (e) It is hereby directed that the specific name *coli* Grassi, 1879, as published in the combination *Amoeba coli* and as validated under (d) above, is to be applied to the large non-dysenteric amoeba of Man described and figured by Dobell (C.C.), 1919, *The Amoebae living in Man* : 78—92, pl. I, figs. 12—15 ; pl. II, fig. 17 ; pl. IV, figs. 55—69.
- (f) The nominal species *Amoeba coli* Grassi, 1879, as validated under (d) above and as defined under (e) above, is hereby designated to be the type species of the nominal genus *Entamoeba* Casagrandi & Barbagallo, 1895 (a genus established upon a misidentified type species).
- (g) The nominal species *Amoeba coli* Grassi, 1879, referred to in (f) above is to be accepted as the type species, by original designation, of the genus *Löschia* Chatton & Lalung-Bonnaire, 1912 (a genus established upon a misidentified type species).
- (3) It is hereby ruled that the generic name *Entamoeba* Casagrandi & Barbagallo, 1895, is not a homonym of the name *Endamoeba* Leidy, 1879.

(4) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* as Names Nos. 754 and 755 respectively: (a) *Entamoeba Casagrandi* & Barbagallo, 1895 (gender: feminine) (type species, by designation, under the Plenary Powers, under (2)(f) above: *Amoeba coli* Grassi, 1879, as validated and defined, under the Plenary Powers, under (2)(d) and (2)(e) above respectively); (b) *Poneramoeba Lühe*, 1909 (gender: feminine) (type species, by original designation: *Entamoeba histolytica* Schaudinn, 1903, as defined under the Plenary Powers, under (2)(c) above) (for use by those specialists who consider that the type species of this genus is generically distinct from the type species of *Entamoeba Casagrandi* & Barbagallo, 1895).

(5) The generic name *Endamoeba* Leidy, 1879 (gender: feminine) (type species, by monotypy: *Amoeba blattae* Bütschli, 1878), placed on the *Official List of Generic Names in Zoology* under the Ruling given in *Opinion 95*, is hereby confirmed in its position on the said *Official List*.

(6) The under-mentioned generic name is hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name No. 159: *Löschia* Chatton & Lalung-Bonnaire, 1912 (a junior objective synonym of *Entamoeba Casagrandi* & Barbagallo, 1895, consequent upon the designation, under the Plenary Powers, under (2)(g) above, of *Amoeba coli* Grassi, 1879, to be the type species of the nominal genus so named).

(7) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 176 to 178 respectively: (a) *blattae* Bütschli, 1878, as published in the combination *Amoeba blattae* (specific name of type species of *Endamoeba* Leidy, 1879); (b) *coli* Grassi, 1879, as published in the combination *Amoeba coli*, as validated and defined, under the Plenary Powers, under (2)(d) and (2)(e) respectively (specific name of type species, by designation, under the Plenary Powers, under (2)(f) above, of *Entamoeba*

Casagrandi & Barbagallo, 1895) ; (c) *histolytica* Schaudinn, 1903, as published in the combination *Entamoeba histolytica* and as defined, under the Plenary Powers, under (2)(c) above (specific name of type species of *Poneramoeba* Lühe, 1909).

(8) The under-mentioned specific names are hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Name Nos. 80 to 85 respectively : (a) *coli* Lösch, 1875, as published in the combination *Amoeba coli*, as suppressed, under the Plenary Powers, under (2)(a) above ; (b) the five specific names specified in (2)(b) above, as there suppressed under the Plenary Powers.

I.—THE STATEMENT OF THE CASE

The problem involved in connection with the status of the generic name *Entamoeba Casagrandi* & Barbagallo, 1895 (Class Rhizopoda) and of the names to be used for the large non-dysenteric amoeba of Man was laid before the International Commission in three documents which together constituted a co-ordinated whole. The first of these documents was a paper submitted to the Commission on 17th January 1945 by Professor Harold Kirby (*University of California, Department of Zoology, Berkeley, California, U.S.A.*). It was not possible for the Commission at that time to arrange for the early publication of this paper in the *Bulletin of Zoological Nomenclature*, and it was accordingly agreed between the Secretary to the Commission and Professor Kirby that he should pursue his previous plan for the publication of this paper in the United States, without prejudice to the right of the Commission to re-publish it at a later date in the *Bulletin* as part of the documentation of this application to the Commission¹. Professor Kirby's paper was accordingly published in the *Journal of Parasitology* in June 1945 (Kirby, 1945, *J. Parasit.* 31 (3) : 177—184). Professor Kirby, at the request of the Secretary, inserted in his paper a footnote in which he invited interested specialists to communicate their views on the problem there discussed to the Secretariat of the Commission for the information of the Members of the Commission when that body came to review—as it was clearly necessary that it should—the Ruling in regard to the name *Entamoeba* given in *Opinion* 99 (1928, *Smithson. misc. Coll.* 73 (No. 5) : 4—8). Professor Kirby's paper was not written in the form of an application to the Commission and accordingly did not contain definite proposals for the solution of the problems involved, being concerned only to expose certain defects both in the factual presentation of the problem given in *Opinion* 99 and in the Ruling

¹ For an account of the arrangement made later for the publication of Professor Kirby's paper see paragraph 10 of the present *Opinion*.

embodied in that *Opinion*. Professor Kirby's paper was as follows :—

“ *Entamoeba coli* ” versus “ *Endamoeba coli* ”

By HAROLD KIRBY

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1. In drawing up the argument for *Opinion* 99 of the International Commission on Zoological Nomenclature, Stiles showed a wish to reject the name *Entamoeba* in the interest of clear distinction. He wrote : “ It seems obvious that unless the name *Entamoeba* is definitely suppressed both the nomenclatorial and the taxonomic status of the species which come into consideration will become even more confused ”. The result of his reasoning was rejection of the name, but the benefits that he hoped for have not been realised. There have been some who in following the *Opinion* have been influenced to take a position regarding the taxonomic status of the amoebae that is not in accord with clear distinction, because unless they took that position the necessary large nomenclatorial departure from the usage that is very widespread in the literature of medical zoology would indeed result in confusion. Retention of the two names *Endamoeba* and *Entamoeba* would permit a clear-cut taxonomic differentiation to be made at the same time that a minimum of departure from customary usage is necessitated. Therefore it seems to me that *Opinion* 99 has actually increased the difficulty that Stiles wished to avoid. I agree with Dobell (1938) that the *Opinion* in its present form should not be regarded as decisive.

2. The equivocal interpretation that some authors have made of *Opinion* 99 is illustrated by Craig's criticism (1944) of Kudo's retention of the name *Entamoeba* : “ It would have been much better had he followed the ruling of the International Committee of Zoological Nomenclature and used the spelling recommended by it as preferable, *i.e.*, ‘ *Endamoeba* ’ ”. Kudo took the position that the species *coli* should not be put into the same genus as the species *blattae*, and his failure to follow *Opinion* 99 made it possible for him to choose *Entamoeba* as the generic name for *coli*. It is not a question of alternative spelling of the name of the genus : the *Opinion* does not constitute an approval of the spelling *Endamoeba* as against *Entamoeba*. There is no choice of orthography : *Endamoeba* is correct and has priority as the name of the genus typified by *E. blattae* ; all amoebae in that genus are called *Endamoeba*, and those not in that genus cannot be called *Endamoeba*.

3. The *Opinion* was published in 1928, and so far as I know, between that time and this only two names have been used in connection with

the species *coli*, *histolytica* and *gingivalis* : *Endamoeba* by those who put the three amoebae into the same genus as *blattae*, and *Entamoeba* by those who do not. The authors in the former group do not accept the generic distinction ; whether or not they follow *Opinion* 99 does not properly enter into their adoption of *Endamoeba*. The authors in the latter group do recognise the generic distinction, and do not follow the *Opinion*. If there should be a third group of authors, who recognise generic distinction among these endozoic amoebae, and accept *Opinion* 99, it would be necessary for them to write *Poneramoeba histolytica*, *Poneramoeba coli*, and *Poneramoeba gingivalis*.

4. The following chronological summary of the history of this matter sets forth the important facts that need to be considered :—

1879. Leidy (1879a, p. 300) introduced the generic name *Endamoeba*, with the one species *Endamoeba blattae*, named *Amoeba blattae* by Bütschli in 1878. The same proposal was printed on 2nd December in Leidy, 1879b, p. 205.

1895. Casagrandi and Barbagallo introduced the generic name *Entamoeba*, giving as the included species *Amoeba coli* (Lösch) and *Amoeba blattarum* (Bütschli). They were ignorant of Leidy's name.

1897. Casagrandi and Barbagallo (p. 163) again printed the name *Entamoeba*, giving as the included species *Entamoeba hominis* and *Entamoeba blattarum*.

1903. Schaudinn, using the generic name *Entamoeba* C. & B., divided *Amoeba coli* of Lösch into two species, *Entamoeba coli* Lösch and *Entamoeba histolytica* n. sp. He did not mention the species *blattae*, and probably was ignorant of Leidy's name.

1910. Chatton assigned various endozoic amoeba to the genus "*Entamoeba* Leidy (1879)". Among the included species were : *Entamoeba coli* (Lösch) 1875, emend. Schaudinn (1903) ; *E. blattae* (Bütschli) 1878 ; *E. ranarum* (Grassi) 1881 ; *E. histolytica* Schaudinn 1903. Chatton stated that the paternity of *Entamoeba* had been wrongly attributed by authors to Casagrandi and Barbagallo. He made no reference to the fact that Leidy's name was actually *Endamoeba*.

1912. Séance du 14 février, mémoire paru le 5 mars (acc. to Chatton, 1912). Chatton and Lalung-Bonnaire write (p. 142) : " La dénomination non latine d'Entamibes appliquée aux amibes normalement parasites du tube digestif est d'un usage commode qui la fera conserver. Mais traduite en nom générique latin, elle ne peut plus s'appliquer actuellement aux amibes du tube digestif des Vertèbrés. Ce n'est pas, en effet, à ces dernières qu'elle a été appliquée en premier lieu. C'est Leidy qui a créé le genre *Entamoeba* pour l'amibe de la Blatte, et ce n'est qu'en 1897 que Casagrandi et Barbagallo l'ont appliquée aux amibes intestinales des Vertèbrés". The authors

considered that the amoebae of vertebrates must be put in a separate separate genus, for which they proposed the name *Löschia*, to contain *coli* Lösch and other species.

1912. Séance du 26 mars. Chatton reported again the generic differentiation of endozoic amoebae made in the above paper. He definitely designated *Löschia coli* Lösch, cysts 8 nuclei or more, as type of the genus *Löschia*. Remarking that protistologists had wrongly attributed the paternity of the genus *Entamoeba* to Casagrandi and Barbagallo, 1897, he wrote (p. 111): "Ces derniers avaient bien appliqué le nom d'*Entamoeba* à une Entamibe humaine, mais Leidy l'avait donné des 1879 à l'*Amoeba blattae* de Bütschli". In a footnote to this statement he noted that Leidy's spelling was "*Endamoeba*", but dismissed that name as an orthographic variant.

1913. Brumpt wrote of the amoebae of Man under the name "*Entamoeba* Leidy, 1879", making the same mistake for *Endamoeba* that Chatton as well as Alexeieff (1912) had previously made. In a footnote (p. 21) he wrote: "Ce même genre a été créé de nouveau en 1897 par Casagrandi et Barbagallo pour leur *E. hominis*, synonyme de *E. coli*". That sentence has been accepted by Stiles and Boeck (1923, p. 122), Stiles and Hassall (1925, p. 8), and Stiles (1928 in *Opinion* 99) as a designation of the type *E. coli* (as *E. hominis*) for *Entamoeba* Casagrandi & Barbagallo. (In the third edition, 1922, Brumpt made the same error of "*Entamoeba* Leidy"; but in the next one, 1927, he used *Entamoeba* C. & B. and noted that *Endamoeba* Leidy should be reserved, in agreement with Wenyon, 1926, for the amoeba of the roach.)

1919. Dobell used *Endamoeba* Leidy, 1879, for *E. blattae* only, and *Entamoeba* Casagrandi & Barbagallo, 1895, for *E. coli*, *E. histolytica*, and *E. gingivalis*.

1923. Stiles and Boeck, in a study of the nomenclatorial status of the protozoa of Man (p. 125), considered the genus *Endamoeba* Leidy, 1879, with two sub-genera: *Endamoeba* Leidy, 1879 (type by monotypy *E. blattae*) and *Poneramoeba* Lühe, 1909 (type by monotypy and original designation *E. histolytica*). They stated (p. 124) that "*Entamoeba* 1895 is not available because of *Endamoeba* 1879"; evidently that is because they thought of *Entamoeba* as a homonym, or orthographic variant, because here they dealt with a separate taxonomic category (the sub-genus) from *Endamoeba*. The type of *Endamoeba* 1895 is given (p. 122, 124) as *E. hominis* tsd.=*coli* and *coli* (s. *hominis*); type by subsequent designation is by Brumpt, 1913.

1925. Stiles and Hassall, in the "Key-Catalogue of the Protozoa Reported for Man", list (p. 8) *Entamoeba* C. & B., 1895, type by subsequent designation *hominis*=*coli*, as a subjective synonym of *Endamoeba* Leidy, 1879. It appears from the definition of subjective synonym by Stiles and Boeck, 1923, that it is a category providing for

cases where the identity in question is not absolute, but depends on "the experience and judgment of the reviser" (p. 138). Since in the key-catalogue the types of *Entamoeba* and *Endamoeba* are given as different, although those two types are treated as members of the same genus, it is likely that the reference is to the difference of opinion about generic assignment. Otherwise *Entamoeba* would simply have been designated as a homonym; that category is dealt with in the same paper. Reference to *Entamoeba* as a synonym is, therefore, evidently on the basis that its type, *Ent. coli*, belongs in the same genus as *End. blattae*, according to Stiles and Hassall.

1928. The International Commission on Zoological Nomenclature published *Opinion* 99 in response to an inquiry as to whether the names *Endamoeba* and *Entamoeba* should be considered homonyms. The summary of the *Opinion* reads: "*Entamoeba* 1895, with *blattae* as type by subsequent (1912) designation, is absolute synonym of *Endamoeba* Leidy, 1879a, p. 300 type *blattae*, and invalidates *Entamoeba* 1895, type by subsequent (1913) designation *hominis=coli*". The report also contained the decision that *Entamoeba* is a homonym of ("philologically the same as") *Endamoeba*. It is presumably on that basis that the Secretary recommended that "the name *Entamoeba* 1895, either with type *hominis=coli* as definitely designated by Brumpt, 1913, pl. 21, or with *blattae* as accepted by Chatton and Lalung (1912, 111) and as implied by Chatton (1910, 282), be definitely invalidated by *Endamoeba* Leidy, 1879a, p. 300, type *blattae*, irrespective of the point whether the type of *Entamoeba* be considered *blattae* or *coli*". (The reference to Chatton and Lalung, 1912, p. 111, is evidently a mistake for Chatton and Lalung-Bonnaire, 1912, p. 142, or for Chatton, 1912, p. 111.)

5. It is evident from this summary that Stiles (1928) was justified in his statement that "the case has already produced considerable confusion in literature". It is also evident, however, that this confusion need not have existed if authors had simply been attentive to the correct forms. Then *Endamoeba* Leidy would have been used for any generic concept including the species *blattae*; and *Entamoeba* C. & B. would either have been rejected, or used solely for any generic concept omitting *blattae* and including *coli*. The errors made by earlier authors should not influence us in an effort to reach a solution of the problem.

6. The answer to the taxonomic problem is subject to differences of opinion. Many authors follow the usage of Stiles and Boeck, 1923, in writing *Endamoeba coli*; that usage has been almost universal in American compilations in medical zoology since it was adopted in 1926 by Craig (who in 1911 used *Entamoeba* Casagrandi and Barbagallo without reference to the genus *Endamoeba* Leidy). American writers who recognise generic distinction between *blattae* and *coli* include Kudo (1939, 1944), Wenrich (*Entamoeba* used for *histolytica* and *coli* in 1940, 1944, and other papers of similar date), Cleveland (Cleveland

and Sanders, 1930, and other papers), Pearse (1942), and Meglitsch (1940, in connection with a profound study of *blattae*). And there are many in various parts of the world who follow the same course; (for example, Wenyon, 1926; Dobell, 1919, 1938; Brumpt, 1936; Reichenow, 1928), so that it is not a question of individual or even minority disagreement in the question of taxonomic differentiation.

7. It is not my purpose in this paper to attempt to defend one position in taxonomy or attack the other. Because of the very large difference between the species *blattae* and *coli* in the nuclear structure of the trophic forms, I think that the burden of proof should rest on those who assert that the two amoebae belong in the same genus—especially when the same authors recognise as valid certain other genera of endozoic amoebae. A comprehensive analysis of the taxonomy of all amoebae, free living and endozoic, is much to be desired. Morris (1936) examined the problem so far as certain endozoic amoebae are concerned; but the result of his study is not conclusive, for it omitted from consideration certain other endozoic amoebae that would also have to have the status of sub-genera of *Entamoeba*, according to his treatment. The purpose of the present paper is nomenclatorial: it is an attempt to show that the word *Entamoeba* should remain available for a genus which *Ent. coli* is the type.

8. *Opinion 99* declares that those of us who think that the species *coli* and similar forms do not belong in the same genus as *blattae* cannot use the name *Entamoeba* for that different genus. There are two grounds upon which that declaration is based. One of them is that *Entamoeba* is a homonym of *Endamoeba*—that the two words are not sufficiently different from one another in orthography to be usable as separate words. The other is that *Entamoeba* has the same type species as *Endamoeba*, and therefore falls as a synonym. The latter decision is the only one given in the summary of *Opinion 99*; it is not necessary that it should be rendered after the generic name has been dismissed as a homonym, so evidently it is intended to provide a reserve in case of doubt.

9. That doubt certainly exists (Dobell, 1938). Obviously we are not here concerned with whether the words have the same meaning or not, but with whether one word is the same word as the other. There is a difference between inadvertent interchange of two names that have a status in zoological nomenclature, and the use synonymously of such words as endoplasm and entoplasm or endoderm and entoderm. There is nothing in the Articles of the International Rules of Zoological Nomenclature that justifies the conclusion that *Entamoeba* must be rejected as a homonym. Certainly Chatton's statement, although cited as authoritative by Stiles, does not constitute justification; it is merely an assertion in a one-line footnote, unsupported by reference to the Rules or anything else. It is only in the argument for *Opinion 99* that evidence is given, but that evidence can as well be read in

support of the retention of the two names as different. Jordan's report in the *Opinion* states that they come in the category of names of which the spelling in Latin varied to a slight extent and which the Rules of Nomenclature do not accept as different. His reference is to Article 35, in which precise differences are given by which specific names of the same origin and meaning are insufficiently distinguished. There seems to be no indication that Article 35 is intended to establish a general category allowing interpretation of other differences than those specified; and in that Article there is nothing whatever about the sort of difference that exists between the words *Endamoeba* and *Entamoeba*. Furthermore, there is evidence in *Opinion* 99 itself that the two words are not necessarily of the same origin, and that would exclude them from consideration under the rules given in Article 35.

10. Article 35 deals only with specific names, and it might seem possible that a different interpretation for generic names would be allowed. Now, however, a precise statement concerning differences in generic names has been given (*Opinion* 147, 1943). A generic name of the same origin and meaning as a previously published generic name is to be rejected as a homonym of the said name if it is distinguished therefrom only by certain specified differences which are the same as the ones given for specific names in Article 35. *Opinion* 99 was not mentioned by the Commission in the rendering of *Opinion* 147, although it dealt with the subject that was being considered.

11. It is not possible to find any definite reason in the Code, or any valid evidence in *Opinion* 99, for rejection of *Entamoeba* as a homonym; but the recommendation in Article 36 can, as Taliaferro remarked, be evoked in support of retention of both names. These facts have already been discussed by Dobell (1938).

12. In *Opinion* 99 the consideration that is apparently regarded as the more important one, since it alone is given in the summary, is that of synonymy—that *Entamoeba* C. & B. is an absolute synonym (or objective synonym, Stiles and Boeck, 1923, p. 135) of *Endamoeba* Leidy, because the names follow their types, and the same species, *E. blattae*, is the type of each. When Stiles presented the case so as to arrive at this conclusion, he changed his approach to the matter. In 1923 he evidently regarded *Entamoeba* as a homonym, in 1925 he designated it as a subjective synonym on the basis of the taxonomic assignment of its species, but in both papers he accepted *E. hominis* = *coli* as type of *Entamoeba* C. & B. by subsequent designation by Brumpt, 1913. In *Opinion* 99, after stating that Brumpt's action was the first type designation in words, Stiles found it possible to interpret Chatton, 1912, as having designated *blattae* as type of *Entamoeba* C. & B. Stiles did not make clear the reason for this interpretation, except in that he cited *Opinion* 6 in support of it.

13. *Entamoeba* C. & B., 1895, is analogous to the hypothetical Genus *A* Linnaeus, 1758, in *Opinion* 6, in that when proposed it contained two species, which we now know as *coli* and *blattae*. Casagrandi and Barbagallo did not indicate which was the type. *Opinion* 6 declares that when an author has removed one of the two species to another monotypic genus, leaving only one species in the first genus, he is to be construed as having fixed the type of the first genus. Jordan's report in *Opinion* 99 follows the parallel exactly, crediting Chatton with having removed *coli* from *Entamoeba* C. & B. to the genus *Löschia*, thereby leaving *blattae* as the type of *Entamoeba*. If that is so, there is probably no doubt about the validity of the conclusion; but I think it is not true that Chatton really dealt with *Entamoeba* C. & B. in making the supposed division.

14. In every place in the three papers that Chatton wrote *Entamoeba* Leidy he was simply making a mistake for *Endamoeba* Leidy. Other authors before him who included *blattae*, with or without other amoebae in *Entamoeba* C. & B. were also making a simple error; they should have used *Endamoeba* Leidy. The acts of Chatton and Lalung-Bonnaire were on *Endamoeba* Leidy, given by mistake as *Entamoeba* Leidy, but not corresponding to *Entamoeba* C. & B. Chatton (1910) grouped various amoebae in this "*Entamoeba* Leidy". Chatton and Lalung-Bonnaire (1912) did not agree with that grouping, and removed *coli* and other species from it, leaving only *blattae*. That made no change in the situation, except to restore it as it was originally. The revision was of the group concept authors had held of "*Entamoeba* Leidy" = *Endamoeba* Leidy, not of that genus itself, which was already attached to its type species.

15. The synonym argument in *Opinion* 99 depends upon crediting Chatton and Lalung-Bonnaire or Chatton with having comprehended *Entamoeba* C. & B. in what they did with "*Entamoeba* Leidy" = *Endamoeba* Leidy. Stiles' paragraph "d" in the argument, puts it: "Chatton's paper (1912, *Bull. Zool. France*, p. 113) is to be interpreted as designating *blattae* as type of "*Entamoeba*" 1897 (= 1895) [emendation of *Endamoeba*, but obviously construed as identical with *Entamoeba*]" (Chatton and Lalung-Bonnaire had priority in this matter, and the page reference is wrong.) But Chatton's "emendation of" (rather, error for) *Endamoeba* was "*Entamoeba* Leidy", not "*Entamoeba* 1897 (= 1895)"; *Entamoeba* C. & B., 1895, was not an emendation, but a separately proposed word. Stiles' word "obviously" could have reference only to Chatton's opinion (1912) that the two words are orthographic variants, and therefore identical. Thus we return to the question of whether or not it is to be admitted that *Entamoeba* is a homonym of *Endamoeba*; and in consequence it appears to me that the whole argument of *Opinion* 99 stands or falls with the decision about the homonym question, in spite of the fact that the summary neglects that decision.

16. The summary of *Opinion* 99 presents the nomenclatorial treatment accorded *Entamoeba* C. & B. by Brumpt in 1913 as opposed to and invalidated by the prior treatment of that genus in the 1912 paper. On the contrary, however, it seems that Chatton and Brumpt had then exactly the same understanding of Casagrandi and Barbagallo's genus. In the historical account given above in 1897 Casagrandi and Barbagallo applied the name *Entamoeba* to intestinal amoebae of vertebrates, and the statement by Chatton (1912, p. 111) that those authors applied the name to a human amoeba. Those are the only references in the 1912 papers to the correct and original use of *Entamoeba*. Brumpt, who in 1913 wrote "*Entamoeba* Leidy," had adopted the nomenclature of amoebae used by Chatton in 1910. In the footnote that was accepted by Stiles as constituting the type designation he simply gave a different wording of what the 1912 authors had pointed out regarding the amoeba for which the genus *Entamoeba* C. & B. had been proposed; but in that wording, and in printing the name "*E. hominis* synonyme de *E. coli*" he was more specific. Brumpt has more recently used both *Endamoeba* and *Entamoeba*; and it is likely that the 1912 authors would have used Casagrandi and Barbagallo's name for the species *coli* and other amoebae of vertebrates instead of *Löschia* except for the fact that they considered *Endamoeba* and *Entamoeba* to be orthographic variants. Despite the fact that Chatton and Brumpt evidently had the same understanding of *Entamoeba* C. & B., Stiles found it possible to give the interpretation that Chatton had designated *blattae* as its type before Brumpt designated *coli* as its type. Yet the only difference in the treatment the two authors gave the genus is that the former did not print the species name, whereas the latter did so. Brumpt, therefore, was not considered to have comprehended *Entamoeba* C. & B. in "*Entamoeba* Leidy", as regards type designation, whereas Chatton was considered to have done so. The interpretation given in this part of the argument in *Opinion* 99 is obviously greatly strained.

CONCLUSION

17. *Opinion* 99 of the International Commission on Zoological Nomenclature does not constitute proof that *Entamoeba* Casagrandi and Barbagallo, 1895, cannot be used as a generic name. Its argument rests on two points: that *Entamoeba* is a homonym of *Endamoeba*; and that *blattae* is the type species of both, so that *Entamoeba* falls also as a synonym of *Endamoeba* Leidy, 1879. The latter point, which is the only one brought out in the summary of *Opinion* 99, is not acceptable: it rests on the interpretation that *Entamoeba* is a homonym of the earlier name. The *Opinion* asserts, but does not demonstrate, that it is a homonym; and there is nothing elsewhere in the Rules or *Opinions* that warrants the assertion. It is appropriate to place the species *coli* and *blattae* in separate genera; and it is considered that *Entamoeba* Casagrandi and Barbagallo, 1895, is available

as a generic name for *coli* and congeneric species at the same time that *Entamoeba* Leidy, 1879, is used for *blattae* and congeneric species.

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2. The second of the three documents which together constitute the application in the present case was a paper by Dr. Ellsworth C. Dougherty (*University of California, Department of Zoology, Berkeley, California, U.S.A.*). Dr. Dougherty first submitted this paper in July 1946, but, as explained in paragraph 8 below, he decided in August 1948 to revise his paper in the light of the discussions then just closed which had taken place during the Public Sessions held by the International Commission on Zoological Nomenclature in Paris in July 1948. Dr. Dougherty completed the revision of his paper in May 1950. Correspondence ensued between the Secretary and Dr. Dougherty on certain points arising on the latter's paper, but these were cleared up by the autumn of that year, thus making it possible for Dr.

Dougherty's paper to be formally submitted on 11th October 1950. Dr. Dougherty's paper was as follows :—

On the problems embraced in "Opinion" 99 (relating to the names "Endamoeba" Leidy, 1879, and "Entamoeba" Casagrandi and Barbagallo, 1895) rendered by the International Commission on Zoological Nomenclature

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1. Introduction.

Recently Professor Harold Kirby (1945) has written an able critique of the decisions embodied in *Opinion* 99 rendered by the International Commission on Zoological Nomenclature (1928). He has concluded that, contrary to certain of these decisions, (1) *Entamoeba* Casagrandi and Barbagallo, 1895, cannot be regarded as a homonym of *Endamoeba* Leidy, 1879; and (2) the species with the trivial name *blattae* of Bütschli (1878) should not, despite the conclusions embodied in *Opinion* 99, be regarded as the type species of both genera, but only of *Endamoeba* Leidy, 1879.

2. I endorse Kirby's thesis wholeheartedly, but I should like to restate the problem in order to emphasize what I consider to be certain fallacies in *Opinion* 99, which are not altogether covered by Kirby, and to make certain further proposals. *Opinion* 99 is a remarkable collection of contradictions and apparent misinterpretations of the *Règles* and certain preceding *Opinions*, as I am prepared to show here.

3. Originally a draft of the present paper was submitted to Mr. Francis Hemming, Secretary of the International Commission, in 1946. Subsequently the author visited Mr. Hemming in August, 1948, and it was agreed between them that, in view of the extensive changes that the Thirteenth International Congress of Zoology, acting on the advice of the International Commission, brought about in the *Règles Internationales de la Nomenclature Zoologique* at the Paris Meetings of July, 1948, the paper should be examined in the light of any pertinent new decisions, revised, and submitted again. I have delayed doing this in anticipation of the publication of the "Official Record of Proceedings of the International Commission on Zoological Nomenclature at their Session, held in Paris in July, 1948". Now that this has been done in Volume 4 of *The Bulletin of Zoological*

Nomenclature, I have been able to redraft the present paper and am resubmitting it herewith.

4. One of the decisions taken by the International Commission at Paris was that *Opinion 99* was to be considered *sub judice* and that specialists were to be invited "to communicate to the Commission their views on the action to be taken by way of confirming, modifying or reversing the decisions recorded in [the *Opinion*]" (see 1950, *Bull. zool. Nomencl.* 4 : 337—338). This was done on the basis of the recognition by the Secretary to the International Commission that *Opinion 99* was "very poor" and should be reconsidered (see 1950, *Bull. zool. Nomencl.* 3 : 128). It is, therefore, particularly appropriate that the present paper be tendered for publication.

5. Moreover, it will be evident from the ensuing sections of this paper that it is of vital importance to the stability of the names of certain genera and species of amoebae parasitic in Man and other animals, that the International Commission not only revise *Opinion 99*, but consider such additional problems not originally raised therein as must be solved in order to give permanency to the names of these parasites. This will require the exercise of the Plenary Powers to secure certain names and the placing of these and other names in the *Official List of Generic Names in Zoology*, and the *Official List of Specific Trivial Names in Zoology*, as provided for at Paris (see 1950, *Bull. zool. Nomencl.* 4 : 267—271, 333—335).

6. To aid both in the revision of *Opinion 99* and in the realization of stability for the names applied to important enteric amoebae, the present paper is organized into several sections: (I) the present introduction; (II) the historical background of *Opinion 99*; (III) and (IV) analyses of the summary and body, respectively, of *Opinion 99*; (V) the status of the trivial names *coli* of Grassi (1879) and *histolytica* of Schaudinn (1903) as applied to certain amoebae of Man; and (VI) the status of the generic names *Endamoeba* Leidy, 1879, *Entamoeba* Casagrandi and Barbagallo, 1895, and certain others applied to enteric amoebae. Finally, in section (VII) are summarized the conclusions drawn from the studies of the preceding sections.

II. Historical Background of "Opinion" 99.

7. *Opinion 99* is entitled "*Endamoeba* Leidy, 1879, vs. *Entamoeba* Casagrandi and Barbagallo, 1895". Its summary reads as follows: "*Entamoeba* 1895, with *blattae* as type by subsequent (1912) designation, is absolute synonym of *Endamoeba* Leidy, 1879a, p. 300, type *blattae*, and invalidates *Entamoeba* 1895, type by subsequent (1913) designation *hominis=coli*".

8. To recapitulate briefly, the following are the principal historical facts* of the case treated by *Opinion* 99, many of which were not, however, considered in the *Opinion* :

- (i) Lösch (1875) described in detail the clinical picture and lesions resulting from an amoebic infection in the large bowel of a young Russian and also provided a description (pp. 203—207) and figures (Pl. x, figs. 1—3), of the causative organism from which it is quite evident that he was dealing with the species now generally called *Entamoeba*, or *Endamoeba*, *histolytica*. To this form he gave the name *Amoeba coli* (: 208).
- (ii) Bütschli (1878 : 273—277) described a new species, *Amoeba blattae*, from the gut of the oriental roach, *Blatta orientalis* Linnaeus, 1758—an insect still known by that name.
- (iii) Grassi (1879) described amoebae from human faeces and identified them (p. 445) as representing the same species as observed by Lösch (1875). However, in the opinion of Dobell (1919), Grassi dealt primarily with the species now generally known as *Entamoeba*, or *Endamoeba*, *coli*, although some individuals, at least, of *E. histolytica* were apparently also seen.
- (iv) Leidy (1879 : 300) formed the new genus *Endamoeba* for the single species, hence type species (by monotypy : Article 30(c) of the current *Règles*†) *Amoeba blattae* Bütschli, 1878.
- (v) Casagrandi and Barbagallo (1895 : 18) in a study of an intestinal amoeba of Man, which they called “*Amoeba coli* Lösch”, erected a new genus *Entamoeba* in apparent ignorance of the existence of the name of *Endamoeba*‡ Leidy, 1879. In it they placed “*Amoeba coli* (Lösch)” and “*Amoeba blattarum* (Bütschli)” [= *Amoeba blattae* Bütschli, 1878]. No type species was designated. It is evident from their paper that these

* For a more detailed history the excellent monograph by Dobell (1919) should be consulted—also the less lucid, although more exhaustive, survey of Stiles and Boeck (1923).

† The most recent presumably official edition of the *Règles* appeared in 1929 in the publication of the X[1927] International Congress of Zoology at Budapest (Int. Comm. Zool. Nomencl. 1929). A new official edition is now in preparation based on extensive changes adopted by the XIII International Congress of Zoology at its Paris Meeting in 1948, acting on the advice of the International Commission on Zoological Nomenclature.

‡ In base a tutti questi dati, anzi, riteniamo necessario tornare sulla classifica delle *Amebe*, stabilendone un nuovo genere, che proponiamo di chiamare *Entamoeba* e vi collochiamo subito l'*Amoeba coli* (Lösch), e l'*Amoeba blattarum* (Bütschli).

authors were dealing not with L \ddot{o} sch's *Amoeba coli*, but with Grassi's—the species today known generally as *E. coli*. They did not themselves form the combination *Entamoeba coli*, although it is credited to them by Dobell (1919); actually this was later done by Schaudinn (1903). In a subsequent paper they (Casagrandi and Barbagallo, 1897 : 103) renamed this species *Entamoeba hominis*.

- (vi) Schaudinn (1903) was responsible for fixing the usage of the trivial names now almost universally employed for the two species of amoebae in humans, originally designated *Amoeba coli* by L \ddot{o} sch (1875) and *Amoeba coli* by Grassi (1879)—what may aptly be termed the dysenteric and large non-dysenteric amoebae of Man, respectively. As Dobell (1919) has pointed out, by far the happiest solution would have been for Schaudinn to accept L \ddot{o} sch's name for the dysenteric species, as would have been correct, and, in view of the fact that Grassi's name was a homonym of L \ddot{o} sch's, to take the next available name, *Entamoeba hominis* Casagrandi and Barbagallo, 1897, for the non-dysenteric species. His observations on morphology as well as nomenclature were on several counts erroneous and have been severely and justifiably criticised by Dobell. His nomenclatorial conclusions were that the non-dysenteric species should be called "*Entamoeba coli* L \ddot{o} sch emend. Schaudinn" (: 564) and that the dysenteric species should be given a new name, for which he proposed "*Entamoeba histolytica*" (: 564, 570). In so doing, he accepted the genus *Entamoeba* Casagrandi and Barbagallo, 1895, for both species. Schaudinn's prestige was such that his determinations became entrenched in the literature, and today the trivial names, at least, dominate all fields concerned with amoebae in Man.
- (vii) L \ddot{u} he (1909 : 421) erected the new genus *Poneramoeba* for the single species, *Entamoeba histolytica* Schaudinn, 1903, from Man; this he specifically designated as the type species of his new genus. It was the next new genus after *Entamoeba* Casagrandi and Barbagallo, 1895, erected or used for amoebae in the vertebrate digestive tract.
- (viii) Chatton (1910 : 282—284) placed in a genus "*Entamoeba* Leidy (1879)" seven supposed species. "*Entamoeba coli* (L \ddot{o} sch) 1875" [= *Amoeba coli* Grassi, 1879], "*E. blattae* (B \ddot{u} tschli) 1878"; "*E. ranarum* (Grassi) 1881" "*E. muris* (Grassi) 1881"; "*E. buccalis* Prowazek, 1904"; "*E. histolytica* Schaudin, 1903"; and "*E. tetragena* Viereck 1906=*E. africana* Hartman 1908" [= *E. histolytica*]. The only mention of Casagrandi and Barbagallo's work appearing in Chatton's paper was in a footnote to the effect that "*Entamoeba*"

had been incorrectly assigned by Doflein (1909) to the authorship of the Italian workers.* Chatton did not cite any species as the type species of his "*Entamoeba*", nor did he mention the spelling "*Endamoeba*" used by Leidy.

- (ix) Chatton and Lalung-Bonnaire (1912 : 142) removed the amoebae of the digestive tract of vertebrates from the genus "*Entamoeba* Leidy" into a new genus *Löschia*, stating that only the species, originally called *Amoeba blattae* by Bütschli (1878) should remain in Leidy's genus. To *Löschia* they transferred the following four species from *Entamoeba* : "*E. coli* Lösch" [=Grassi], "*E. tetragena* Viereck" [= *histolytica* Schaudinn], "*E. ranarum* Grassi", and "*E. muris* Grassi", and for the forms with a *tetragena*-[=*histolytica*-] like nuclear picture they raised a new subgenus *Viereckia*. "*E. coli* Lösch" was designated as the type species of the nominotypical subgenus, hence of the genus, *Löschia*.† They incorrectly claimed that Casagrandi and Barbagallo (1897) had applied Leidy's genus to the amoebae of the vertebrate digestive tract.‡
- (x) Chatton (1912 : 111) republished the conclusions already expressed in his paper with Lalung-Bonnaire, but mentioned only "*Löschia coli*" and "*Viereckia tetragena*" in the genus *Löschia*. For the first time he mentioned—in a footnote—the spelling *Endamoeba*,§ but dismissed it as an orthographic variant.
- (xi) Brumpt (1913 : 25) referred the amoebae of Man to the genus "*Entamoeba* Leidy, 1879". He also stated—in a footnote—that the same genus had been created in "1897" by Casagrandi and Barbagallo for¶ "*E. coli*".
- (xii) Crawley (1913 : 185) listed "*Entamoeba histolytica* Schaudinn, 1903" as the type species of the genus *Entamoeba*.

* C'est à tort que Doflein (1910 [= 1909]) attribue la paternité du genre *Entamoeba* à Casagrandi et Barbagallo (1897 [sic]).

† On pourra même distinguer subgénériquement les Entamibes à 4 noyaux (type *tetragena*), des Entamibes à 8 noyaux (type *coli*), sous le nom de *Viereckia n. subgen.*

‡ C'est Leidy qui a créé le genre *Entamoeba* pour l'amibe de la Blatte, et ce n'est qu'en 1897 que Casagrandi et Barbagallo l'ont appliquée aux amibes intestinales des Vertébrés.

§ Avec la variante orthographique *Endamoeba* qui ne peut en aucune façon constituer un prétexte à conserver les deux noms simultanément.

¶ Ce même genre a été créé de nouveau en 1897 par Casagrandi et Barbagallo pour leur *E. hominis*, synonyme de *E. coli*.

- (xiii) Dobell (1919 : 17—19) in a scholarly review of the nomenclature of the amoebae in Man accepted as valid for amoebae of the vertebrate digestive tract the genus *Entamoeba* Casagrandi and Barbagallo, 1895 (*non Endamoeba* Leidy, 1879), formally (: 18) selected as its type species “*E. coli*”, and included as congeneric with *E. coli* the species *E. histolytica*, among others. He confined the genus *Endamoeba* Leidy, 1879, to *Amoeba blattae* Bütschli, 1878. In later parts of his paper he reviewed in detail the nomenclatorial history of the species today generally known by the trivial names *coli* and *histolytica*.
- (xiv) Stiles and Boeck (1923 : 121—150) exhaustively discussed the nomenclature of the dysenteric and non-dysenteric amoebae of Man and dismissed (: 124) *Entamoeba* Casagrandi and Barbagallo, 1895, as a homonym* of *Endamoeba* Leidy, 1879. Nevertheless they regarded Brumpt (1913) as having fixed the type species of the former as *Entamoeba hominis* [= *Amoeba coli* Grassi, 1879], and they also recognized a separate nominal genus *Entamoeba* Chatton, 1912 (over-looking Chatton's 1910 paper and not recognising the priority of Chatton and Lalung-Bonnaire's paper) as an emendation of *Endamoeba* Leidy, 1879, consequently with the same type species, *Amoeba blattae* Bütschli, 1878. They provisionally regarded *Amoeba blattae* Bütschli, 1878 (type species of *Endamoeba* Leidy, 1879—by monotypy), and *Entamoeba hominis* Casagrandi and Barbagallo, 1897 [= *Amoeba coli* Grassi, 1879] as congeneric. The foregoing conclusions were essentially followed by Stiles and Hassall (1925), except that they listed *Entamoeba* Casagrandi and Barbagallo, 1895, as a synonym rather than a homonym of *Endamoeba* Leidy, 1879.
- (xv) The International Commission on Zoological Nomenclature in *Opinion* 95 (1926) placed *Endamoeba* Leidy, 1879, with type species *Amoeba blattae* Bütschli, 1878 (by monotypy) on the *Official List of Generic Names in Zoology*. Later the International Commission (1928) reviewed some of the facts given here under paragraphs (i) to (xiv), and published *Opinion* 99. After much indecisive discussion it was finally concluded in the summary of the latter *Opinion*, that Chatton (1912) had selected a type species for “*Entamoeba* 1895”, when he transferred *Entamoeba coli* and other species in vertebrates to the genus *Löschia* and thus left only *Entamoeba blattae* in the genus *Entamoeba*. This conclusion was presumably based on *Opinion* 6, which was invoked in the body of the *Opinion*. Obviously, it was not questioned whether

* [*Entamoeba* 1895 is not available because of *Endamoeba* 1879.]

Chatton actually was dealing with *Entamoeba* Casagrandi and Barbagallo, 1895, when he supposedly fixed its type species.

9. I proposed herein to analyse in detail in Sections III and IV, on the summary and body of *Opinion* 99 respectively, the question of the selection of a type species for the genus *Entamoeba* Casagrandi and Barbagallo, 1895, and to show that from the historical facts it must be concluded that no one actually selected its type before Dobell (1919).

III. Analysis of the Summary of "Opinion" 99.

10. First of all it can be shown that the summary of the *Opinion* itself cannot be supported by the *Règles* and previous *Opinions*. The crux of this summary is based upon one point in the general conclusions of the body of the *Opinion*, and in the report by Commissioner K. Jordan, which appears at the end of the discussion on the *Opinion* and was unanimously adopted by the Commissioners present at the Tenth International Congress of Zoology in Budapest, 1927. In this summary, as one can read in the quotation thereof already given, appears the following phrase: "*Entamoeba* 1895, with *blattae* as type by subsequent designation (1912)". This is presumably based on the following statement in Jordan's report (: 8, under "A. Nomenclatorial Considerations"): "In 1912 Chatton separated from *Entamoeba* the species *coli* as genotype of his new genus *Löschia*, leaving *blattae* as only species in *Entamoeba*. As nobody had dealt, nomenclatorially, with *Entamoeba* prior to 1912, Chatton's action made *blattae* the type of *Entamoeba*". Actually Chatton and Lalung-Bonnaire (1912) were the first to do this; Chatton (1912) merely reaffirmed their earlier action.

11. Now the foregoing quotation is an important statement as it suggests that a species may become the "type by elimination". Yet in the present *Règles* (Article 30(k)) the designation of "type by elimination" is only one of a number of non-mandatory *Recommendations*. It is true that under one limited condition the *Opinions* have established that elimination may fix a type species. Thus in *Opinion* 6* (Int. Comm. Zool. Nomencl., 1910, 1944b), the summary reads (in its most recent form—1944b): "When, in the case of a generic name published not later than 31st December 1930 a later author divided the genus 'A—', species 'A— b—' and 'A— c—', leaving genus 'A—', only species 'A— b—', and genus 'C—', monotypic with species 'C— c—', the second author is to be construed as having fixed the type of the genus 'A—'." But, as pointed out by Mr. Francis Hemming, Secretary to the Commission, in his editorial notes on the new edition of *Opinion* 6

* Now cancelled, except for historical purposes, and its decisions incorporated into the *Règles* (see 1950, *Bull. zool. Nomencl.*, 4 : 157, 165—166).

(1944b : 134—135), the above summary is explicit in limiting its jurisdiction to the case where the original genus “A—” has two species and two species only, and the second genus “C—” is monotypic.*

12. Let us suppose then, for the sake of argument, that Chatton and Lalung-Bonnaire (1912) comprehended *Entamoeba Casagrandi* and Barbagallo, 1895, when they transferred species from “*Entamoeba*” to *Löschia*. In this light one finds that *Entamoeba Casagrandi* and Barbagallo, 1895, qualifies as genus “A—” in the sense of *Opinion 6*—with two species “*Amoeba coli*” and “*Amoeba blattarum*”. However, Chatton and Lalung-Bonnaire’s genus “C—” in the sense of *Opinion 6* would be *Löschia*, which emphatically was not monotypic. The vital point here is that it was formed for four species in two subgenera : *Löschia* and *Viereckia*.

13. It may be claimed that, in effect, *Opinion 99* established a new precedent and extended the application of selection of “type by elimination” beyond *Opinion 6*. But it does not appear that such was the intention of Commissioner Jordan or of Secretary Stiles. Actually they were merely invoking *Opinion 6* as the following quotations from the body of the discussion on the *Opinion* indicates : (p. 6, ¶ 3) “. . . accordingly, for Chatton *Endamoeba 1879* and *Entamoeba 1897* were simple orthographic variants and it is not at all impossible (renaming and *cf. Opinion 6*)” [italics mine—E. C. D.] “to construe his papers (1910, 282, and 1912, 110) as a designation of *blattae* as type of *Entamoeba Casagrandi* and Barbagallo, 1897” ; (P. 7, ¶ 2 (d)) “since (under *Opinion 6*) Chatton’s paper (1912, *Bull. Soc. zool. France* : 113) is to be interpreted as designating *blattae* as type of “*Entamoeba*” 1897 (=1895), [emendation of *Endamoeba*, but obviously construed as identical with *Entamoeba*] . . .”. But *Opinion 6*, as it is now understood, does not apply here. It is clear

* Prior to the Congress of 1948, not all workers agreed with Mr. Hemming that *Opinion 6* need be so narrowly interpreted. Thus Sabrosky (1947) analysed the body of the *Opinion* and pointed out that in paragraph 2 the statement was made that “cases which were as clear as the one given in the diagram [i.e., the scheme presented in the summary] should be construed under Article 30(g), namely, that the type of the original genus was fixed when, through a division of its species, it was definitely made into a monotypic genus”. It was Sabrosky’s contention on the basis of this statement that a genus “A—” need not have two species in order to come under the jurisdiction of *Opinion 6*, so long as all but one species have been removed by some subsequent worker, thus leaving “A—” monotypic. Sabrosky’s interpretation is a reasonable one. However, the summary of *Opinion 6*, as it stands, conveys no such flexibility of interpretation and must, it seems to me, be the principal arbiter of the point. Moreover, the International Commission at Paris recommended in its report, which was accepted by the Thirteenth Congress, *inter alia*, the insertion in Article 30, Rule (g), of words to convey the substance of the summary of *Opinion 6*, i.e., only the limited interpretation thereof (see 1950, *Bull. zool. Nomencl.* 4 : 157) ; moreover, *Opinion 6* has now been cancelled for interpretative purposes (see previous footnote).

that the Commission based the most vital part in the summary of *Opinion* 99 on an invocation of a previous ruling, which at the time was, at best, of questionable application and must now be regarded as erroneously applied.*

IV. Analysis of the Body of "Opinion" 99.

14. Since it has been demonstrated that the summary of *Opinion* 99 and in effect its conclusions are based on false premises, it would be well to examine the other points discussed in the body of *Opinion* 99 and to analyse the historical facts to determine why, as I consider, (1) no other and justifiable grounds exist for an equivalent decision—namely, that the type of *Entamoeba* Casagrandi and Barbagallo, 1895, was fixed as *Amoeba blattae* Bütschli, 1878; and (2) why a type selection was not made until Dobell's work (1919).

15. Dobell (1938) has published a critique of *Opinion* 99 in which he has pointed out certain fundamental inconsistencies in the presentation and body of the *Opinion*, but has not considered all of the basic nomenclatorial issues involved. Kirby (1945)² has aired most of the fallacies of the *Opinion*. My analysis is partly an extension of his, with additional observations on applications of certain provisions of the *Règles* and *Opinions*. Dobell's works (1919, 1938) have been indispensable for their complete accounts of the history and zoology of the enteric amoebae of Man.

16. There are three principal statements or assumptions in the body of *Opinion* 99 that deserve attention. These may be summarised as follows:—

- (i) The point, not brought out in the "Summary", but nevertheless expressed by Secretary Stiles in several places in his discussion—that *Entamoeba* is a virtual homonym of *Endamoeba*. This was summarised by Commissioner K. Jordan under "Philological Considerations" (: 8) as follows: "In zoology the prefixes *Ento*— and *Endo*— are frequently interchanged. In zoological terminology they are located as being identical. They come under the category of names of which the spelling in Latin varied to a slight extent and which the Rules of Nomenclature do not accept as different, such as *auctumnalis* and *autumnalis* . . . *Entamoeba* is philologically the same as *Endamoeba*". Despite this conclusion, the body of the discussion (: 5, ¶ 4) contains evidence that the prefixes

* Cancelled except for historical purposes, and part of its decision to be incorporated into the *Regles* (see 1950, *Bull. zool. Nomencl.*, 4 : 161—162, 165—166). See also footnote to paragraph 11.

² See para. 1 of the present *Opinion*, where Professor Kirby's paper is reprinted.

endo— and *ento*— can be regarded as of different Greek origin (from ἔνδον and ἐντός respectively).

- (ii) The point that Chatton's emendation *Entamoeba* (1910) of Leidy's *Endamoeba* (1875) automatically takes the same type, *Amoeba blattae* (: 6, ¶ 2). "*Endamoeba* Leidy, 1879a, p. 300, has for its monotype *Amoeba blattae*. The generic name was emended by Chatton, 1910, Ann. Zool. exp. gén., 282, and 1912, Bull. Soc. Zool. France, p. 110, to read *Entamoeba*, and by Chatton and Lalung, 1912, BSPE, p. 142, in the same sense. Accordingly, there is a generic name *Endamoeba* and one *Entamoeba* with the same species (*E. blattae*) as type".
- (iii) The point that Brumpt (1913) among others may be regarded as having selected the type species of *Entamoeba* Casagrandi and Barbagallo, 1895 (: 6, ¶ 2). "... The first type designation in words was by Brumpt (1913, p. 21) as *Entamoeba hominis* which is *Amoeba coli* renamed".

17. Of these three points the first has been demonstrated to be incorrect by Dobell (1938) and Kirby (1945); the second is demonstrably true; and the third is equivocal. All three are taken up in order in the following three sub-sections ((a) to (c)).

(a) Orthographic independence of *Endamoeba* and *Entamoeba*.

18. As Dobell (1938) pointed out, the *Règles* themselves provide a basis for accepting both *Endamoeba* and *Entamoeba*. Article 34 states that "a generic name is to be rejected as a homonym when it has previously been used for some other genus of animals". In connection with rejection of such names as homonyms, Article 36 contains the following recommendation: "It is well to avoid the introduction of new generic names which differ from generic names already in use only in termination or in a slight variation in spelling. But when once introduced, such names are not to be rejected on this account. Examples: *Picus*, *Pica* . . .".

19. But, if one may question the legal force of a "Recommendation" then *Opinion* 147* (Int. Comm. Zool. Nomencl., 1943), as Kirby (1945) has pointed out, specifically delimits the categories of spellings that render generic names homonyms, to those differing by: (1) the use of "ae", "oe", and "e"; the use of "ei", "i", and "y"; or the use of "c" and "k"; (2) the aspiration or non-aspiration of a consonant; (3) the presence or absence of a "c" before a "t";

* Cancelled, except for historical purposes, and part of its decision to be incorporated into the *Règles* (see 1950, *Bull. zool. Nomencl.*, 4 : 161—162, 165—166).

and (4) the use of a single or double consonant. The difference between the prefixes *Endo*— and *Ento*— thus lies outside of the limits imposed by *Opinion 147*.³

(b) Selection of type species for *Entamoeba* Chatton, 1910.

20. Kirby has pointed out that Chatton (1910) referred to the genus *Endamoeba* Leidy, 1879, as “*Entamoeba* Leidy”. As used by Chatton, it included, as already noted, the type species of Leidy’s genus, *Amoeba blattae* Bütschli, 1878, and a number of other species, among them “*Amoeba coli* Lösch” [= *Amoeba coli* Grassi, 1879]. I believe that Chatton unintentionally changed the spelling of Leidy’s genus, thus in effect creating a new name for it, which should be termed *Entamoeba* Chatton, 1910. (No previous author spelled Leidy’s genus in this way, Schaudinn (1903) and others that used the spelling *Entamoeba* having credited it to Casagrandi and Barbagallo.) Stiles and Boeck (1923 : 123) must have come essentially to the same conclusion when they recognised both *Entamoeba* Casagrandi and Barbagallo, 1895, and *Entamoeba* Chatton, 1912 [=1910]. Their action supports my contention that Chatton thus was actually not dealing with the genus *Entamoeba* Casagrandi and Barbagallo, 1895, his only reference to the latter being in error—namely that “*Entamoeba*” should be credited to Leidy, not to the Italian workers. *Entamoeba* Chatton, 1910, is a homonym of *Entamoeba* Casagrandi and Barbagallo, 1895 ; but there is no basis for assuming them to be objective synonyms, as the writers of *Opinion 99* appear to have believed, inasmuch as the type species of the latter genus had not then been determined.

21. We thus actually have three nominal genera : *Entamoeba* Leidy, 1879 (monotypic), *Entamoeba* Casagrandi and Barbagallo, 1895 (2 species), and *Entamoeba* Chatton, 1910 (7 species, including those in the second genus). As Kirby has maintained, the consequence of any action by Chatton (1910, 1912) and Chatton and Lalung-Bonnaire (1912) should affect only the genus with which Chatton originally dealt—which I call *Entamoeba* Chatton, 1910 (= *Endamoeba* Leidy, 1879, emended). This principle was expressly recognized by the Paris Congress of 1948 and is now to be incorporated in the *Règles* (see 1950, *Bull. zool. Nomencl.* 4 : 347—348).

22. I wish now to take up the second point raised by the body of *Opinion 99*, namely, whether Chatton (1910) can be construed as having fixed the type of *Entamoeba* Chatton, 1910. In this connection Article 30(f) is involved.

³ The provisions of Article 34 were further revised by the Fourteenth International Congress of Zoology, Copenhagen, 1953, which adopted a provision that a generic name is to be treated as a homonym of another such name if it differs from it in spelling by even one letter (1953, *Copenhagen Decisions zool. Nomencl.* : 78, Decision 152).

23. Article 30 Rule (f) states that "in case a generic name without originally designated type is proposed as a substitute for another generic name with or without type, the type of either, when established, becomes *ipso facto* type of the other". Inasmuch as *Entamoeba* Chatton, 1910, is in effect a substitute for *Endamoeba* Leidy, 1879, it follows that *blattae*, type of the earlier genus by monotypy, automatically becomes type of the later genus. Therefore, it is difficult to understand why the Commission, in the summary of *Opinion* 99, did not rely on this rule to establish the type species of *Entamoeba* of Chatton (1910) instead of invoking *Opinion* 6, which was not clearly applicable. Actually, Rule (f) in Article 30 has certain difficulties of application to which I hope to draw the attention of the Commission in a separate communication. Possibly it is on the basis of these difficulties that the Commissioners failed to invoke it in the summary of *Opinion* 99. In any event, the application of this rule seems straightforward in the case under consideration.

(c) Selection of a type species for *Entamoeba* Casagrandi and Barbagallo, 1895.

24. We can now examine the third point raised by the body of *Opinion* 99, namely, that Brumpt (1913) may be regarded as having made a statement that, were it not for Chatton's earlier action (1912), would have had the effect of selecting a type species for *Entamoeba* Casagrandi and Barbagallo, 1895. In this connection it also is desirable to determine when such a selection was validly made and also to explore further the consequences of Chatton's treatment of his genus, *Entamoeba* (= *Endamoeba* Leidy, 1879). Aside from *Opinion* 6, which has already been shown to be inapplicable, one Article in the *Règles* and two *Opinions* are intimately involved in these problems—namely, Article 30 and *Opinions* 45 and 164.

25. Brumpt (1913), as already stated, made the following statement (in translation; for original see last footnote on page 23): "This same genus" [as *Entamoeba* Chatton, 1910 = *Endamoeba* Leidy, 1879] "was created *de novo* in 1897 by Casagrandi and Barbagallo for their *E. hominis*, synonym of *E. coli*". It was on this basis that Stiles and Boeck (1923), Stiles and Hassall (1925), and the Commission (in *Opinion* 99) concluded that what Brumpt's statement amounted to was a potential selection of a type species for *Entamoeba* Casagrandi and Barbagallo, 1895.

26. I feel that this position is inconsistent with the *Règles* and with the previously rendered *Opinion* 45 (Int. Comm. Zool. Nomencl., 1912).

27. Article 30, which deals with the designation, indication, and selection of type species of genera, contains a paragraph following paragraph (g) which reads as follows: "The meaning of the expression 'select the type' is to be rigidly construed. Mention of a species as an illustration or example of a genus does not constitute a selection of type". Several *Opinions* have been rendered specifically dealing with the concept of type selection "rigidly construed". Most of these do not apply to the present case except that all up to *Opinion* 99 demonstrate a strict approach to the question of type selection. *Opinion* 45, however, is of considerable significance to the question under consideration.

28. The summary of *Opinion* 45 reads as follows: "So far as one can judge from the premises submitted, the type of *Syngnathus* Linnaeus, 1758, has never been definitely designated, and there is no objection to designating, as such, the species *acus* Linnaeus to accord with general custom and convenience". Without going into the entire history of this case it can be briefly stated that the genus *Syngnathus* Linnaeus, 1758, with seven original species was restricted by Rafinesque (1810b) to two species—a Linnean species, *Syngnathus aequoreus*, hence the only one of the original species, and a new species, *Syngnathus punctatus* Rafinesque, 1810. He did not select a type species, nor had any previous author. No type selection was made during the rest of the 19th century. However, Jordan and Evermann (1896: 774) gave in the synonymy of "*Syngnathus*, Linnaeus" the following citation: "*Syngnathus*, Rafinesque, Caratteri, 18, 1810 (restricted to *aequoreus*)". Actually, as is pointed out in *Opinion* 45, Rafinesque (1810a), in the reference cited by Jordan and Evermann, did not mention the genus *Syngnathus*; this was done in the later work (1810b). It was the conclusion of the Commission that Jordan and Evermann did not thereby select a type species for the genus *Syngnathus* Linnaeus, 1758.

29. Now it seems to me that in the cases of *Syngnathus* of Jordan and Evermann (1896) and *Entamoeba* of Brumpt (1913) are parallel. In both cases statements, not strictly accurate, were made by later authors about the genera of earlier workers. In neither case was there an unequivocal selection of a type species. Yet the Commission saw fit in the first case to determine that Jordan and Evermann's statement, "restricted to *aequoreus*", was not, "rigidly construed", a type selection, whereas Brumpt's statement, "created *de novo* . . . for . . . *E. hominis*" was such a selection. As indicated, Brumpt's statement erred, for actually Casagrandi and Barbagallo raised *Entamoeba* for two species: "*Amoeba coli*" and "*Amoeba blattarum*".

30. *Opinions* 45 and 99 are, I feel, in essential disharmony on the point discussed. Whereas *Opinion* 99 is the later and might be held as superseding *Opinion* 45, the point in which the latter is inconsistent with the former is the fundamental issue of its case and that of *Opinion*

99 is a secondary issue. I do not believe that the International Commission meant, in effect, to reverse *Opinion* 45 in *Opinion* 99. Furthermore I feel that the decision that Brumpt (1913) selected a type species for the genus *Entamoeba* Casagrandi and Barbagallo, 1895, is inconsistent with the spirit of the phrase "rigidly construed" in Article 30.

31. Having considered Brumpt (1913), we can now return to Chatton (1910). A point, the significance of which has not so far been examined, is that the genus *Entamoeba* Chatton, 1910, actually included the two species placed by Casagrandi and Barbagallo in their genus. Some may argue that in so doing Chatton actually comprehended the Italian workers' genus despite his designation "*Entamoeba* Leidy". This is not necessarily so, however. A genus is rigidly defined by its type species; unless or until a type species is designated or selected, a given genus is of necessity a plastic entity to a greater or lesser degree. Chatton in effect united *both* Leidy's and Casagrandi and Barbagallo's genus in his *Entamoeba*.

32. What happened, in effect, was that Chatton incorrectly—from the standpoint of priority—included *Entamoeba* Casagrandi and Barbagallo, 1895, in synonymy with his *Entamoeba* (1910); no objection from the standpoint of priority would, however, extend to synonymising the Italian workers' genus with *Entamoeba* Leidy, 1879, the action that he, in fact, meant to take. Despite the fact that Chatton (1910) must be considered as having automatically designated the type species of *Entamoeba* Chatton, 1910 (= *Entamoeba* Leidy, 1879, emended) as *Amoeba blattae* Bütschli, 1878, this should have no effect on the type of *Entamoeba* Casagrandi and Barbagallo, 1895, a genus which was named independently and not as an emendation of Leidy's name "*Entamoeba*" and which Chatton cannot reasonably be regarded as comprehending in his use of the generic name "*Entamoeba*". *Opinion* 164* (Int. Comm. Zool. Nomencl., 1945a) makes this point clear.

33. The summary of *Opinion* 164 states in part as follows: "When two or more genera are united on taxonomic grounds, such action in no way effects the types of the genera concerned". Thus, even though the type species of *Entamoeba* Chatton, 1910, may be regarded as having been designated, that designation cannot, according to *Opinion* 164, affect the type species of *Entamoeba* Casagrandi and Barbagallo, 1895, which Chatton in effect united with his genus.

34. Although Crawley (1913 : 185) listed *Entamoeba histolytica* Schaudinn, 1903, as type species of *Entamoeba*, this cannot be taken as a valid selection of a type species inasmuch as *E. histolytica* was not

* Cancelled, except for historical purposes, and its decision incorporated into the *Règles* (see 1950, *Bull. zool. Nomencl.* 4 : 157, 165—166).

an originally included species. It is true that the nominal species *Amoeba coli* L \ddot{o} sch, 1875 [= *E. histolytica*], was placed in *Entamoeba* as originally proposed by Casagrandi and Barbagallo (1895), but the organism so identified by them was in actuality the modern *E. coli*.

35. The first unequivocal selection of a type species for *Entamoeba* Casagrandi and Barbagallo, 1895, was made by Dobell (1919 : 17—18) as follows : “ I shall therefore continue to refer three of the common amoebae of Man—namely *E. coli*, *E. histolytica*, *E. gingivalis*—to the, genus *Entamoeba* Casagrandi and Barbagallo, 1895 ; whilst provisionally I reserve the separate genus *Endamoeba* Leidy, 1879, for the amoeba of the cockroach. On this system, the type species of *Entamoeba* is *E. coli*, and the type of *Endamoeba* is *E. blattae* ”. Dobell specifically stated that the *E. coli* so cited was based on Grassi’s, not on L \ddot{o} sch’s organism. For reasons given in Section VI even his selection encounters technical difficulties.

V. The status of the Trivial Names “ *coli* ” of Grassi (1879) and “ *histolytica* ” of Schaudinn (1903).

36. It is desirable at this point to bring up two questions which are only partly related to *Opinion* 99, but are nevertheless of great significance in the nomenclature of amoebae in Man. These questions are respectively the validity of the trivial name *coli* for the large non-dysenteric amoebae of Man and the validity of the trivial name *histolytica* for the amoebae of human amoebic dysentery.

37. It is very important to ensure the status of the trivial name *coli*, inasmuch as it is universally applied today to the large non-dysenteric amoeba of Man, known as *Entamoeba*, or *Endamoeba*, *coli*—the species, moreover, which Dobell has designated as type of *Entamoeba* Casagrandi and Barbagallo, 1895. If this cannot be done under the existing rules, the International Commission must be called upon to exercise their Plenary Powers.

38. As already pointed out in paragraph 8(i), the trivial name *coli* appeared first in the description by L \ddot{o} sch (1875) of organisms from a patient suffering with dysentery ; these unquestionably represented the species now designated *Entamoeba*, or *Endamoeba*, *histolytica*. For detailed historical discussions of the nomenclature of *E. coli* and *E. histolytica* I refer to Dobell (1919) and Stiles and Boeck (1923). It should be remarked, however, that Stiles and Boeck (1923) regarded *Amoeba coli* L \ddot{o} sch, 1875, as representing a mixture of species and contended that Stiles (1892) was the first worker to restrict the name to a single component species—the large non-dysenteric amoeba. On this basis, they found it possible to accept the trivial name *coli* as valid under the rules for that form. However, Dobell (1919) has presented compelling evidence that L \ddot{o} sch (1875) dealt essentially with *E. histolytica*. It seems entirely logical on the basis of L \ddot{o} sch’s usage to regard

coli as the correct trivial name for the dysenteric amoeba of Man. However, Dobell ingeniously found it possible to reject Lösch's selection on the basis of its being a vernacular name without nomenclatorial status. Lösch wrote as follows: "Da die von mir beschriebenen Amöbe, so viel mir bewusst, überhaupt mit keiner der bisher bekannten Formen vollkommen übereinstimmt, so scheint es mir gerechtfertigt, dieselbe bis auf Weiteres mit einem besonderen Namen zu bezeichnen und nach ihrem Fundorte etwa *Amoeba coli* zu nennen". Dobell pointed out that Lösch's "*Amoeba coli*" was written in ordinary type, not italicised or spaced; he further stated that "there is nothing to indicate that Lösch did not employ it as a mere descriptive term". In view of the wording of Lösch's sentence this last statement by Dobell is considerably strained. However, the latter offered a rational solution to a vexing nomenclatorial problem, one which no reasonable systematist, lacking a legal means of rectifying the situation, would hesitate to follow if he wished to honour the *Règles* without contravening general usage. The alternative without suspension of existing rules is to substitute *coli* for *histolytica*, a procedure which would today disrupt the firmly established practices of two generations of protozoologists and medical scientists. Since this cannot be done in harmony with the rules and since *coli* is so firmly linked with the large non-dysenteric amoeba, there appears to be involved a clear case where strict application of the *Règles* would result in confusion rather than uniformity. It is therefore important that *coli* be secured for the large non-dysenteric amoeba of Man by the International Commission acting on the Plenary Powers.

39. It would seem quite illogical, however, in securing *coli* to this end for it to be attributed to the authorship of Lösch. Since Grassi (1879) was the first to apply this trivial name to the large non-dysenteric amoeba, it is reasonable to follow Dobell and attribute it to his authorship. On this basis it is necessary to suppress *coli* of Lösch (1875) and validate the otherwise homonymous *coli* of Grassi (1879).

40. It is very important to ensure the status of the trivial name *histolytica* inasmuch as it is universally applied today to the dysenteric amoeba of Man.

41. Though Dobell (1919), as mentioned, reviewed in detail the nomenclatorial history of the dysenteric amoeba of Man, I find it impossible to follow him in all of his conclusions. He discussed four names (aside from *Amoeba coli*) as possibly referring to this species, which antedate *E. histolytica* Schaudinn, 1903—*Amoeba urogenitalis* of Baelz (1883, p. 237), *Amoeba vaginalis* of Blanchard (1885, p. 15), *Amoeba intestinalis* of Blanchard (1885, p. 15) and "amoeba dysenteriae" of Councilman and Lafleur (1891, p. 405). Dobell advanced reasons for rejecting each of these—Baelz's and Blanchard's names as unidentifiable and Councilman and Lafleur's as an obviously vernacular name. I have already pointed out that Dobell cannot be

followed in his rejection of *Amoeba coli* Lösch, 1875, as a systematic name; I believe that the same thing can be said for Councilman and Lafleur's "amoeba dysenteriae". They stated: "We have called the organism, which was first described by Lösch under the name *amoeba coli*, the '*amoeba dysenteriae*'." Inadvertently or through ignorance they merely neglected to capitalize "*amoeba*". In regard to the other names cited by Dobell, I have no essential disagreement with his disposition of them. However, even if his rejection of Councilman and Lafleur's name were followed, the matter could not rest there, as can be seen by the following statement by him (: 28): "Whilst it is true that the terms *A. coli* and *A. dysenteriae* were sometimes used correctly as zoological names, yet they were never used with clear specific conceptions before the time of Schaudinn". The first person to use *Amoeba dysenteriae* as an unquestionably systematic designation was Stiles (1892: 524—525) in a review of Councilman and Lafleur's paper (1891). It is true that Stiles credited this name to the latter authors, but this fact makes it no less available. That this is so is demonstrated in *Opinion 4** (Int. Comm. Nomencl., 1907, 1944a), the summary of which reads as follows: "Manuscript names acquire standing in nomenclature when printed in connection with the provisions of Article 25, and the question as to their validity is not influenced by the fact whether such names are accepted or rejected by the author responsible for their publication".⁴ The discussion by Hemming in the second edition of this *Opinion* (1944a) makes the availability of such a name as *Amoeba dysenteriae* of Stiles (1892) doubly clear.

42. It might seem, therefore, that, if *coli* of Lösch is suppressed as the trivial name for the dysenteric amoeba, *Amoeba dysenteriae* Councilman and Lafleur, 1891 (or Stiles, 1892), would be the next available name. However, Dobell (1919) either did not know about, or ignored, the name *Amoeba dysenterica* used by Pfeiffer (1888: 662) as a new name for *Amoeba coli* of Lösch.† Stiles and Boeck (1923), in

* To be cancelled, except for historical purposes, and its decision incorporated into the *Règles* (see 1950, *Bull. zool. Nomencl.*, 4: 145—146, 165—166).

† Pfeiffer wrote: "Im Jahr 1875 folgt alsdann die erste ausführliche und genaue Beschreibung von Lösch in St. Petersburg . . . Dessen *Amoeba coli* s. *dysenterica* Lösch hat so viel Aehnlichkeit mit den aus dem Bläscheninhalt von Vaccine, Herpes, Varicella, etc., abgebildeten grossen Zellgebilden dass morphologisch und nach den Bewegungserscheinungen keine Trennung möglich ist". ["In 1875 then follows the first detailed and precise description—by Lösch in St. Petersburg . . . *Amoeba coli* or *dysenterica* Lösch has so much similarity to the large cell structures that have been pictured with the vesicular inclusions of vaccinia, herpes, varicella, etc., that no distinction is possible, either morphologically or on the basis of the appearance of their movements".] In subsequent discussion Pfeiffer referred to Lösch's form as *Amoeba coli* rather than *Amoeba dysenterica*. Lösch did not employ the word "dysenterica" as a trivial name; that name must therefore be credited to Pfeiffer.

⁴ The Fourteenth International Congress of Zoology, Copenhagen, 1953, deleted from the *Règles* the portion of the Ruling given in *Opinion 4* which conferred the status of availability upon names published in synonymies without independent descriptions (1953, *Copenhagen Decisions zool. Nomencl.*: 63—64, Decision 115).

accepting Lösch's name as being restricted by Stiles (1892) to the non-dysenteric amoeba, found it possible also to reject *Amoeba dysenterica* Pfeiffer, 1888, and *Amoeba dysenteriae* Councilman and Lafleur, 1891, on the basis that these were renamings of *Amoeba coli* Lösch, 1879, and for that reason had to follow the last name. It is sufficient to point out, since *Amoeba coli* Lösch, 1875, actually applied to the dysenteric species, and on that account alone the other names cited did likewise, Stiles and Boeck's contention is inappropriate. Thus, with the suppression of *coli* of Lösch (1875), *Amoeba dysenterica* Pfeiffer, 1888, is the next unquestionably and validly applied name for the dysenteric amoeba. However, it is impractical to consider substituting *dysenterica* of Pfeiffer (1888) for *histolytica* of Schaudinn (1903). This is clearly a case where strict application of the *Règles* would result in confusion rather than uniformity.⁵ The best interests of science will be served by retention of the specific name *Entamoeba histolytica* Schaudinn, 1903 (the next available name for the dysenteric amoeba after *Amoeba dysenterica* Pfeiffer, 1888, and *Amoeba dysenteriae* Councilman and Lafleur, 1891), the trivial name *histolytica* now being universally employed in the zoological and medical fields. In so doing the International Commission must suppress all previous potential or actual synonyms of the trivial name *histolytica*.

43. It is highly important that the International Commission give attention to the names of these important amoebae in Man. A formal recommendation in that connection is made in the final section of this paper.

VI. The status of the generic name "Endamoeba" Leidy, 1879, "Entamoeba" Casagrandi and Barbagallo, 1895, and certain others applied to Enteric Amoebae.

44. The genus *Endamoeba* Leidy, 1879, with its type species *Amoeba blattae* Bütschli, 1878, has already been placed on the *Official List of Generic Names in Zoology* in *Opinion 95* (Int. Comm. Zool. Nomencl., 1926). This action is completely supported by the *Règles*.

45. The genus *Entamoeba* Casagrandi and Barbagallo, 1895, has been shown to be independent of *Endamoeba* on an orthographic basis. However, its exact nomenclatorial status has not yet been considered herein. At this point it is necessary to consider the status of *Entamoeba coli* as type species of *Entamoeba*. We have already seen (paragraph 8 (v)) that the Italian workers originally included in their genus the species "*Amoeba coli* (Lösch)" and "*Amoeba blattarum* (Bütschli)" [= *Amoeba blattae* Bütschli]. But the organism called "*Amoeba coli*" by them and later (Casagrandi and Barbagallo, 1897) renamed

⁵ The expression "greater confusion than uniformity" here quoted was taken from the Plenary Powers provisions as it then existed. This phrase was deleted, and the scope of the provisions considerably widened, by the Fourteenth International Congress of Zoology, Copenhagen, 1953 (1953, *Copenhagen Decisions zool. Nomencl.* : 22—23, Decision 20).

Entamoeba hominis was clearly not the dysenteric amoeba, to which Lösch's name applied, but the large non-dysenteric form. Thus Dobell in selecting *Amoeba coli* as the type species of *Entamoeba* Casagrandi and Barbagallo, 1895, was so doing on the basis of an originally misidentified species. It is true that he corrected the initial error by properly identifying the species that the Italian workers had misidentified. However, the case still requires the attention of the Commission as prescribed in *Opinion* 168* (Int. Comm. Zool. Nomencl. 1945b), the title of which reads "On the principles to be observed in interpreting Article 30 of the International Code in relation to the names of genera based upon erroneously determined species . . ." In the summary it is requested that, where such a case has been discovered, it "should be submitted with full details to the International Commission on Zoological Nomenclature and . . . that, pending their decision thereon, the genus should be regarded as of doubtful status". It may be remarked here that what is true of *Entamoeba* Casagrandi and Barbagallo, 1895, is equally true of *Löschia* Chatton and Lalung-Bonnaire, 1912, for which "*E. coli* Lösch" [= *Amoeba coli* Grassi, 1879] was also designated as the type species.

46. It therefore follows that *Entamoeba* Casagrandi and Barbagallo, 1895 (as also *Löschia* Chatton and Lalung-Bonnaire, 1912), as a genus based on a misidentified type species, is technically of doubtful status. Actually, there is no question of the practical application of either *Entamoeba* or *Endamoeba* to certain enteric amoebae of Man; such is essentially universal. But it is important that the matter be legally clarified.

47. The question may well arise in view of the general confusion in the medical literature over the spelling of the genus used for the dysenteric and large non-dysenteric amoebae of Man, *Entamoeba* being quite general in the United States and *Entamoeba* in Britain, whether there ought to be independent genera *Endamoeba* and *Entamoeba*, which have been accepted as such by Dobell (1938), Kirby (1945), and others. Admittedly the close similarity of the names is regrettable. However, from the practical standpoint, no real difficulty should be encountered, for *Endamoeba blattae* and its congeners, being parasitic in insects, are of no particular consequence to medical scientists. Those zoologists that deal with insect parasites can be expected to be familiar with their nomenclature and are not likely to confuse the two genera; whereas the spelling *Endamoeba* as applied to amoebae in vertebrates may be some time a-dying in the general medical literature, this fact need not disturb scholars concerned with the real genus *Endamoeba*. There does not seem, therefore, to be any real objection to the co-existence of two independent genera with the names *Endamoeba* and *Entamoeba*.

* Cancelled, except for historical purposes, and its decision incorporated into the *Règles* (see 1950, *Bull. zool. Nomencl.*, 4 : 158—159, 165—166).

48. The way thus seems well indicated. The International Commission should validate *Entamoeba* Casagrandi and Barbagallo, 1895, a genus based on an originally misidentified species as type species, for which the species *Amoeba coli* Grassi, 1879 (non L \ddot{o} sch, 1875) should be designated, Dobell's selection being thereby validated.

49. Dobell (1938), expressed the conviction that the dysenteric and non-dysenteric amoebae of Man should be placed in separate genera. Although he has not himself done this formally, it would also be well for the International Commission to recognise the generic name that would be used for the dysenteric amoeba in case the proposed separation becomes generally recognised. As mentioned in paragraph 8 (vii), *Poneramoeba* was erected by L \ddot{u} he (1909) with *Entamoeba histolytica* Schaudinn, 1903, as only species and therefore as type species. As first genus after *Entamoeba* available for the dysenteric amoeba, it would come into use. The International Commission might also permanently sink *L \ddot{o} schia* Chatton and Lalung-Bonnaire, 1912, by validating *Amoeba coli* Grassi, 1879, as its type species, thereby rendering it an objective synonym of *Entamoeba* Casagrandi and Barbagallo, 1895.

50. *Entamoeba* Casagrandi and Barbagallo, 1895, and *Poneramoeba* L \ddot{u} he, 1909, with their respective type species, should therefore join *Endamoeba* Leidy, 1879, on the *Official List of Generic Names in Zoology*.

VII. Conclusions and Recommendations.

51. The conclusions and recommendations of the present study are in three categories : those that relate to *Opinion* 99 itself ; those that relate to the trivial names *coli* and *histolytica* ; and those that relate to the generic names *Entamoeba* Casagrandi and Barbagallo, 1895, and *Poneramoeba* L \ddot{u} he, 1909. The first are covered under paragraph 52 ; the second under paragraphs 53—55 ; and the third under paragraph 56.

52. I feel that it is necessary, and I hereby request, that the International Commission on Zoological Nomenclature should render an *Opinion* in which they first cancel *Opinion* 99 on the ground that the decision set forth therein is incorrect and misleading in certain important respects, and second make the following points, in substitution for those made in the *Opinion* so cancelled :

- (i) The nominal genus *Entamoeba* Casagrandi and Barbagallo, 1895, was established independently of the nominal genus *Endamoeba* Leidy, 1879, the name *Entamoeba* as used by Casagrandi and Barbagallo being neither an accidental misspelling nor an emendation of the name *Endamoeba* as

previously used by Leidy. Under Articles 34 and 36, the names *Endamoeba* and *Entamoeba* are not homonyms of one another.

- (ii) Chatton (1912) did not select a type species for the genus *Entamoeba* Casagrandi and Barbagallo, 1895. In fact, the supposed action of Chatton (1912) on the basis of which type selection was to be inferred according to the *Opinion* actually was originally carried out by Chatton and Lalung-Bonnaire (1912). The genus with which these authors had dealt was *Endamoeba* Leidy, 1879, to which Chatton himself in 1910 had applied the name *Entamoeba* as a tacit emendation of the name *Endamoeba*. Further, even if Chatton and Lalung-Bonnaire (1912) had been dealing with *Entamoeba* Casagrandi and Barbagallo, 1895, instead of with *Entamoeba* Chatton, 1910 (*emend. pro Endamoeba* Leidy, 1879), the action which they then took would not have constituted a valid selection of *Amoeba blattae* Bütschli, 1878, as the type species of that genus, for they did not make a definite type selection under Rule (g) in Article 30, nor did their action constitute such a selection under the special provisions of *Opinion* 6.
- (iii) Brumpt's action in 1913 did not constitute a valid selection of a type species for *Entamoeba* Casagrandi and Barbagallo, 1895, for Brumpt did not comply with the requirements of Rule (g) in Article 30.
- (iv) The first author definitely to select a type species for *Entamoeba* Casagrandi and Barbagallo, 1895, was Dobell (1919), who so selected *Amoeba coli* Grassi, 1879. This selection has been accepted by subsequent authors, but it must be noted that Casagrandi and Barbagallo (1895) did not include this nominal species in the genus *Entamoeba*, the name which they did so include being "*Amoeba coli* (Lösch)", which is the name for a different species, being the dysenteric amoeba of Man now universally known as *Entamoeba histolytica* Schaudinn, 1903. On the other hand, it cannot be doubted that the species which Casagrandi and Barbagallo referred to as "*Amoeba coli* (Lösch)" was the species now universally identified as the large non-dysenteric amoeba of Man, *Amoeba coli* Grassi, 1879. Thus, the genus *Entamoeba* Casagrandi and Barbagallo, 1895, is one based on a mis-identified type species. In these circumstances the Commission acting under the instructions given to it by the International Congress of Zoology as to the action to be taken in any such case where the Commission is satisfied that confusion would result from the strict application of the *Règles*, should hereby use their Plenary Powers to designate *Amoeba coli*

Grassi, 1879, to be the type species of the genus *Entamoeba* Casagrandi and Barbagallo, 1895, thus validating Dobell's selection.

53. It is necessary, if serious confusion is to be avoided, that the trivial names of the large non-dysenteric and the dysenteric amoebae of Man should be placed on an unassailable foundation. The problems arising in connection with the specific names *Amoeba coli* Grassi, 1879, and *Entamoeba histolytica* Schaudinn, 1903, are accordingly summarized in the following paragraphs.

54. Two points arise in connection with the name *Amoeba coli* Grassi, 1879 : (1) whether this is an available name ; and (2) whether it undoubtedly represents the large non-dysenteric amoeba of Man. As regards (1), the name *Amoeba coli* Grassi, 1879, is not an available name because of the prior *Amoeba coli* Lösch, 1875, which applies to the dysenteric amoeba. However, in view of the universal use of *coli* for the non-dysenteric amoeba and the grave confusion which would result if this name had now to be discarded on technical nomenclatorial grounds, I recommend that this particular difficulty should be overcome by the Commission using its Plenary Powers to suppress the trivial name *coli* Lösch, 1875, as published in the binominal combination *Amoeba coli*, and validate the trivial name *coli* Grassi, as published in the binominal combination *Amoeba coli*. As regards (2), there is no reasonable doubt as to the principal species to which Grassi applied the name *coli*, but I recommend that, in order to settle this matter beyond dispute, the Commission should apply in this case the procedure which they adopted in Paris for the purpose of determining the identity of the species to which the trivial name *iris* Linnaeus, 1758, as published in the binominal combination *Papilio iris*, should apply (see 1950, *Bull. zool. Nomencl.* 4 : 359—361)—that is, that the Commission should use its Plenary Powers to direct that the name *coli* Grassi, 1879, as published in the binominal combination *Amoeba coli*, should be the trivial name of the large non-dysenteric amoeba of Man as definitively described and figured by Dobell (1919, pp. 78—92 ; pl. i, figs. 12—15 ; pl. ii, fig. 17 ; pl. iv, fig. 55—69).

55. The name *Entamoeba histolytica* Schaudinn, 1903, is universally applied to the dysenteric amoeba of Man and the greatest confusion would result if it were necessary to change this practice for some technical nomenclatorial reason. On the other hand, there is no doubt that there are at least three older names for this species, namely, *Amoeba coli* Lösch, 1875, *Amoeba dysenterica* Pfeiffer, 1888, and *Amoeba dysenteriae* Councilman and Lafleur, 1891 (or Stiles, 1892). In addition, there are three other names which may have been applied to this species, namely : (1) *Amoeba urogenitalis* Baelz, 1883, (2) *Amoeba vaginalis* Blanchard, 1885, and (3) *Amoeba intestinalis* Blanchard, 1885. Accordingly, in order to provide an unquestionably valid title for the trivial name *histolytica* Schaudinn, 1903, as published

in the binominal combination *Entamoeba histolytica*, I recommend that the Commission, in addition to suppressing the trivial name *coli* Lösch, 1875, as published in the binominal combination *Amoeba coli*, as recommended in paragraph 54 above, should use their Plenary Powers to suppress the under mentioned trivial names and, having done so, should place those names (with *coli* Lösch, 1875) on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*: (a) *urogenitalis* Baelz, 1883, as published in the binominal combination *Amoeba urogenitalis*; (b) *vaginalis* Blanchard, 1885, as published in the binominal combination *Amoeba vaginalis*; (c) *intestinalis* Blanchard, 1885, as published in the binominal combination *Amoeba intestinalis*; (d) *dysenterica* Pfeiffer, 1888, as published in the binominal combination *Amoeba dysenterica*; and (e) *dysenteriae* Councilman and Lafleur, 1891 (or Stiles, 1892), as published in the binominal combination *Amoeba dysenteriae*. Finally, as in the case of the trivial name *coli* Grassi, 1879, I recommend that the Commission should use its Plenary Powers definitely to attach the trivial name *histolytica* Schaudinn, 1903, as published in the binominal combination *Entamoeba histolytica*, to the dysenteric amoeba of Man as now recognized by specialists. I recommend that this object should be secured by the Commission directing that the trivial name *histolytica* Schaudinn, 1903, is to be the trivial name for the species as definitively described and figured by Dobell (1919, pp. 31—70; pl. i, figs. 1—6; pl. ii, fig. 16; pl. iii; pl. iv, figs. 70—76).

56. While it is of the first importance that the trivial names of these amoebae should be firmly established, it is also necessary that the generic name *Entamoeba* Casagrandi and Barbagallo, 1895, be stabilized by being placed on the *Official List of Generic Names in Zoology* (type species *Amoeba coli* Grassi, 1879 [syn. *Entamoeba coli* (Grassi, 1879) Schaudinn, 1903], to be validated by the International Commission through the invocation of their Plenary Powers). In view of the fact that such an authority as Dobell felt that generic separation of the dysenteric and large non-dysenteric amoebae of Man will have to be carried out, it would also be well for the International Commission to place *Poneramoeba* Lühe, 1909 (type species *Entamoeba histolytica* Schaudinn, 1903, by original designation), first genus available for the dysenteric amoeba of Man, on the *Official List*. These two generic names would thereby join *Endamoeba* Leidy, 1879 (type species *Amoeba blattae* Bütschli, 1878 [syn. *Endamoeba blattae* (Bütschli, 1878) Leidy, 1879], by monotypy), already placed on the *Official List* under a decision taken in *Opinion* 95. The foregoing actions are hereby recommended.

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3. The third and last of the documents which constitute the application in the present case was a Report by Mr. Francis Hemming, Secretary to the Commission, prepared in response to a request⁶ addressed to him by the Commission at its Session held in Paris in 1948. Mr. Hemming's Report, which was based upon the review of the issues involved given in the papers previously submitted by Professor Harold Kirby and Dr. Ellsworth C. Dougherty recommended the cancellation of *Opinion* 99 as incorrect and misleading and contained a series of definite proposals designed to put upon a firm foundation the generic and specific nomenclature of the dysenteric and non-dysenteric amoebae of Man. Immediately upon completing his Report, Mr. Hemming communicated it in draft to Professor Kirby and Dr. Dougherty for observations. On both these specialists intimating that they were in agreement with the proposals set forth in the draft, Mr. Hemming signed the Report for submission to the Commission. Mr. Hemming's Report was as follows :—

Report on the investigation of the nomenclatorial problems associated with the generic names "Endamoeba" Leidy, 1879, and "Entamoeba" Casagrandi & Barbagallo, 1895 (Class Rhizopoda)

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

1. The need for a thorough review of the ruling in regard to the status of the generic name *Entamoeba* Casagrandi and Barbagallo, 1895 (Class Rhizopoda) in relation to the name *Endamoeba* Leidy, 1879, dealt with in the *Opinion* previously rendered by the International

⁶ For a fuller reference to the request here referred to see paragraph 6 of the present *Opinion*.

Commission on Zoological Nomenclature as *Opinion 99*, was first formally brought to the attention of the Commission in January, 1945, when Professor Harold Kirby (University of California, Berkeley, California, U.S.A.) submitted a paper entitled “*Entamoeba coli* versus *Endamoeba coli*”, in which he drew attention to what appeared to be a serious error in that *Opinion*.

2. Owing to wartime difficulties, it was not possible at that time at once to publish Professor Kirby's paper in the *Bulletin of Zoological Nomenclature* and it was accordingly arranged that, in order to draw the attention of interested protozoologists to the nomenclatorial issues involved, Professor Kirby's paper should (as already contemplated) be published as soon as possible in the *Journal of Parasitology* and that it should be republished in the *Bulletin of Zoological Nomenclature* as soon as it was possible to submit this case to the International Commission for consideration. Not long afterwards, Professor Kirby's paper duly appeared (June, 1945, *J. Parasit.* **31** : 177—184). At my suggestion, Professor Kirby added a footnote in which he explained that the problem dealt with in that paper had been submitted to the International Commission for decision and invited any specialist who might wish to comment on the conclusions reached in that paper to send those comments direct to myself, as Secretary to the Commission.

3. In July, 1946, Dr. Ellsworth C. Dougherty (University of California, Berkeley, California, U.S.A.) submitted to the Commission a paper in which he accepted the conclusions reached by Professor Kirby and brought forward additional matters which appeared to call for consideration.

4. *Notice given in 1947 of the possible use of the Plenary Powers in the present case* : Notice of the possible use of the Plenary Powers in this case was given on November 1947 to the journals *Science and Nature* and was published shortly thereafter. This notice, like the footnote attached to Professor Kirby's paper of 1945, failed to elicit any objections. Thus, by the time that the International Commission met in Paris in July, 1948, there were strong grounds for believing that a revision of *Opinion 99* on the lines suggested would be in accordance with the general wishes of protozoologists.

5. *Preliminary action taken by the International Commission in Paris in 1948* : The attention of the International Commission was drawn to this question during its Session held in Paris in 1948 in Commission Paper I.C. (48) 17 (1950, *Bull. zool. Nomencl.* **3** : 128), which was considered by the Commission at its Twelfth Meeting during that Session (Paris Sessions, 12th Meeting, Conclusion 22 (4)) (1950, *Bull. zool. Nomencl.* **4** : 338). The Commission then recommended—and the Congress agreed—that the decision in *Opinion 99* (unlike the decisions in other *Opinions*) should not be recorded in the Schedule

to the *Règles* then established for the recording of such decisions, until after the subject matter of that *Opinion* had been thoroughly reviewed and that, pending the outcome of that review, the question dealt with in *Opinion* 99 were to be regarded as being *sub judice*.

6. *Review of the decision given in "Opinion" 99* : Since the Paris Congress Dr. Dougherty has thoroughly reviewed both the literature of the amoebae of Man dealt with in the present Report and the conclusions in regard to the names published for those species (both at the genus level and at the species level) given in *Opinion* 99. This investigation has confirmed the conclusions which he and Professor Kirby had previously reached and has brought to light certain other supplementary matters which will also need to be dealt with before the nomenclature of these species can be placed on a sound legal footing. Dr. Dougherty has accordingly revised his earlier paper to take account of these additional considerations. At the same time he has drafted the concluding recommendations, so as to secure that they deal with all the matters (relating to the placing on *Official Lists* and *Official Indexes* of names dealt with in *Opinions*) which the Paris Congress decided should in future be dealt with in cases of this kind.

7. *Close parallel between the history of the names published for the amoebae of Man and that of the names published for the malaria parasites of Man* : The data submitted by Professor Kirby and Dr. Dougherty amply justify the decision taken by the Commission in Paris to review the ruling given in *Opinion* 99, for they disclose a tissue of errors and misconceptions in that *Opinion*. The history of the names published for the amoebae of Man, as set forth in the documents now submitted, shows a remarkable similarity with the history of the names published for the malaria parasites of Man ; in each case, the universal practice of protozoologists for the last half-century has been totally at variance with the provisions of the *Règles* ; in each case, it was Schaudinn who was principally responsible for the nomenclatorial errors which have become so deeply embedded in protozoological and medical literature ; in each case, the Commission attempted (in the case of the names of the amoebae of Man, in *Opinion* 99 ; in the case of the malaria parasites of Man, in *Opinion* 104) to reach a settlement without recourse to the Plenary Powers, the only difference in this regard between these two cases being that in the latter case the Commission sought to give valid force to the current practice of protozoologists, while in the former it did not.

8. *Action recommended* : During its Paris Session the International Commission corrected the errors previously made in regard to the names of the malaria parasites of Man (see 1950, *Bull. zool. Nomencl.* 4 : 594—624) and it is clearly desirable that a corresponding correction of the errors made in regard to the names of the dysenteric and non-dysenteric amoebae of Man should now be made as quickly as possible, in the light of the data submitted by Professor Kirby and Dr. Dougherty,

the object of the action so taken being to give valid force to the current nomenclatorial practice of protozoologists and to avoid the appalling confusion which would result from any attempt strictly to apply the *Règles* to those names. In order to correct the errors in *Opinion* 99 and to deal fully with the associated nomenclatorial problems (as was done when a corresponding correction was made of errors in regard to the names of the malaria parasites of Man), it would be necessary for the International Commission to take—and I recommend that it should take—action on the following lines :—

(1) cancel *Opinion* 99 as incorrect and misleading ;

(2) use its Plenary Powers :—

(a) to suppress :—

(i) for the purposes both of the Law of Priority and also of the Law of Homonymy, the trivial name *coli* L \ddot{o} sch, 1875, as published in the binominal combination *Amoeba coli* ;

(ii) for the purposes of the Law of Priority but not for those of the Law of Homonymy, the under-mentioned trivial names :—

(α) *urogenitalis* Baelz, 1883, as published in the binominal combination *Amoeba urogenitalis* ;

(β) *vaginalis* Blanchard, 1885, as published in the binominal combination *Amoeba vaginalis* ;

(γ) *intestinalis* Blanchard, 1885, as published in the binominal combination *Amoeba intestinalis* ;

(δ) *dysenterica* Pfeiffer, 1888, as published in the binominal combination *Amoeba dysenterica* ;

(ϵ) *dysenteriae* Councilman and Lafleur, 1891, as published in the binominal combination *Amoeba dysenteriae* ;

(b) to direct that the trivial name *histolytica* Schaudinn, 1903, as published in the binominal combination *Entamoeba histolytica*, is to be applied to the large dysenteric amoeba of Man described and figured by Dobell (C.C.), 1919, *The Amoebae living in Man* : 31—70, Pl. I, figs. 1—6 ; pl. II, fig. 16 ; Pl. III ; Pl. IV, figs. 70—76 ;

- (c) to direct that the specific name *Amoeba coli*, as published by Grassi in 1879, is to be treated as being a specific name then published for the first time and to validate the trivial name so published ;
- (d) to direct that the trivial name *coli* Grassi, 1879, as published in the binominal combination *Amoeba coli*, as validated in (c) above, is to be applied to the large non-dysenteric amoeba of Man described and figured by Dobell (C.C.), 1919, *loc. cit.* : 78—92, Pl. I, figs. 12—15; Pl. II, fig. 17 ; Pl. IV, fig. 55—69 ;
- (e) to designate *Amoeba coli* Grassi, 1879, as validated under (c) above and as defined in (d) above, as the type species of the genus *Entamoeba* Casagrandi and Barbagallo, 1895 (a genus based upon a misidentified type species) ;
- (f) to direct that *Amoeba coli* Grassi, 1879, validated and defined as in (e) above, is to be accepted as the type species by original designation of *Löschia* Chatton and Lalung-Bonnaire, 1912 (a genus based upon a misidentified type species) ;
- (3) to declare that the name *Entamoeba* Casagrandi & Barbagallo, 1895, is not a homonym of the name *Endamoeba* Leidy, 1879 ;
- (4) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—
- (a) *Entamoeba* Casagrandi & Barbagallo, 1895 (type species by designation under the Plenary Powers, under (2) (e) above : *Amoeba coli* Grassi, 1879, as validated and defined under (2) (c) and (2) (d) above respectively) (gender of generic name : feminine) ;
- (b) *Poneramoeba* Lühe, 1909 (type species, by original designation : *Entamoeba histolytica* Schaudinn, 1903) (gender of generic name : feminine) (for use by workers who consider *Entamoeba histolytica* Schaudinn, 1903, to be generically distinct from *Amoeba coli* Grassi, the type species of *Entamoeba* Casagrandi & Barbagallo, 1895) ;
- (5) to confirm the position on the *Official List of Generic Names in Zoology* of *Endamoeba* Leidy, 1879 (type species, by monotypy : *Amoeba blattae* Bütschli, 1878) (gender of generic name : feminine) ;

- (6) to place the generic name *Löschia* Chatton & Lalung-Bonnaire, 1912 (type species, by designation under the Plenary Powers under (2) (f) above: *Amoeba coli* Grassi, 1879 (a junior objective synonym of *Entamoeba* Casagrandi & Barbagallo, 1895)) on the *Official Index of Rejected and Invalid Generic Names in Zoology* ;
- (7) to place the under-mentioned specific trivial names on the *Official List of Specific Trivial Names in Zoology* ;
- (a) *blattae* Bütschli, 1878, as published in the binominal combination *Amoeba blattae* (type species of *Endamoeba* Leidy, 1879) ;
- (b) *coli* Grassi, 1879, as published in the binominal combination *Amoeba coli* (as validated and defined under the Plenary Powers under (2) (c) and (2) (d) above respectively) (type species of *Entamoeba* Casagrandi & Barbagallo, 1895) ;
- (c) *histolytica* Schaudinn, 1903, as published in the binominal combination *Entamoeba histolytica* (as defined under the Plenary Powers under (2) (b) above) (type species of *Poneramoeba* Lühe, 1909) ;
- (8) to place the under-mentioned trivial names on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology* ;
- (a) *coli* Lösch, 1875, as published in the binominal combination *Amoeba coli*, as suppressed under the Plenary Powers under (2) (a) (i) above) ;
- (b) the under-mentioned trivial names suppressed under the Plenary Powers under (2) (a) (ii) above :—
- (a) *urogenitalis* Baelz, 1883, as published in the binominal combination *Amoeba urogenitalis* ;
- (β) *vaginalis* Blanchard, 1885, as published in the combination *Amoeba vaginalis* ;
- (γ) *intestinalis* Blanchard, 1885, as published in the binominal combination *Amoeba intestinalis* ;
- (δ) *dysenterica* Pfeiffer, 1888, as published in the binominal combination *Amoeba dysenterica* ;
- (ε) *dysenteriae* Councilman & Lafleur, 1891, as published in the binominal combination *Amoeba dysenteriae*.

9. Before signing the present Report, I submitted it in draft for comment to Professor Harold Kirby and Dr. Ellsworth C. Dougherty, the two specialists who had communicated with the Commission on this subject. Both have since informed me that they concur in the solution suggested.

II.—THE SUBSEQUENT HISTORY OF THE CASE

4. **Registration of the present application :** Immediately upon the receipt of Professor Kirby's preliminary communication of January 1945, the problem of the revision of *Opinion 99* and, in particular, the question of the status to be accorded to the name *Entamoeba Casagrandi* & Barbagallo, 1895, was allotted the Registered Number Z.N.(S.) 185.

5. **Discussions during the period 1945—1948 :** As has been explained in Section I of the present *Opinion*, difficulties arising from paper rationing, shortage of labour at the printing works and similar causes made it impossible in 1945 for the Commission to arrange for the immediate publication in the *Bulletin of Zoological Nomenclature* of Professor Kirby's paper, but the addition then made to that paper, as then published in the *Journal of Parasitology*, of an appeal to interested specialists to furnish the Commission with statements of their views gave Public Notice that the question of the revision of *Opinion 99* was under consideration. On 20th November 1947, this was supplemented by the formal issue of Public Notice of the possible use of the Commission's Plenary Powers in the present case to the serial publications prescribed by the Ninth International Congress of Zoology, Monaco, 1913. Neither the appeal published in 1945 with Professor Kirby's paper nor the formal issue of Public Notice in 1947 elicited any objection to the suggested revision of *Opinion 99*.

6. **Submission to the Commission in 1948 of a proposal that the problems raised by the Ruling given in "Opinion" 99 should be brought under review :** When the International Commission met

in Paris in 1948, Mr. Hemming, as Secretary, took the view that the issues involved in the proposal that the Ruling given in *Opinion 99* should be brought under review were so complex that it was desirable that this matter should be deferred until it was possible to publish in the *Bulletin of Zoological Nomenclature* the paper received from Professor Kirby in 1945 and the application submitted by Dr. Ellsworth C. Dougherty in the following year. Mr. Hemming decided therefore not to bring forward the present case at that Session. In view, however, of the fact that the Commission was then engaged in making arrangements for the codification of the Rulings given in its earlier *Opinions*, Mr. Hemming considered it desirable in this and certain other cases to suggest that the codification of the Rulings previously given should be deferred. Accordingly, in a paper (Paper I.C.(48)17) then laid before the Commission, Mr. Hemming submitted the following recommendation (Hemming, 1950, *Bull. zool. Nomencl.* 3 : 127—128) :—

(90) *Supplementary decisions needed in regard to matters dealt with in certain " Opinions " before the contents of those " Opinions " can usefully be inserted in Schedules to the " Règles " :—*

.

- (d) *Opinion 78* Name of the Rocky Mountain Spotted Fever Tick
and
- (e) *Opinion 99* *Endamoeba* and *Entamoeba*

Both these *Opinions* are very poor, have been the subject of much criticism, and have been re-submitted by specialists for further consideration. It is accordingly proposed :—

- (a) that the Commission should announce that the matters dealt with in these two *Opinions* should be treated as being *sub judice* ; and
- (b) that, pending a review of the problems involved, the contents of neither of these *Opinions* should be entered in the Fourth Schedule to the *Règles*.

.

7. Decision taken by the International Commission in 1948 as to the procedure to be adopted in the matter of the review of

“ **Opinion** ” 99 : The problem raised by the objections which had been received in regard to the Ruling given in *Opinion* 99 was considered by the International Commission on Zoological Nomenclature at the Twelfth Meeting of its Paris Session held at the Sorbonne in the Amphithéâtre Louis-Liard on Monday, 26th July 1948, at 1445 hours. The following is an extract from the Official Record of the Proceedings of the International Commission, setting out the decision then reached in regard to the present case (1950, *Bull. zool. Nomencl.* 4 : 337—338) :—

THE COMMISSION agreed :—

- (4) as regards *Opinion* 78 (“ Case of *Dermacenter andersoni* versus *Dermacenter venustus*”) and *Opinion* 99 (“ *Endamoeba* Leidy, 1879, versus *Entamoeba* Casagrandi and Barbagallo, 1895 ”) :—
- (a) that the decisions given in the foregoing *Opinions* should be reviewed by the Commission as soon as possible ;
 - (b) that, pending the conclusion of the review referred to in (a) above, the decisions recorded in the foregoing *Opinions* should not be incorporated in the Schedules to the *Règles* ;
 - (c) that a statement should be issued announcing the decisions recorded in (a) and (b) above, stating that, pending the completion of the review specified in (a) above, the matters dealt with respectively in *Opinion* 78 and *Opinion* 99 are to be treated as being *sub judice* and inviting specialists to communicate to the Commission their views on the action to be taken by way of confirming, modifying or reversing the decisions recorded in those *Opinions*.

8. Revision in 1950 by Dr. Ellsworth C. Dougherty of his application for the review of the Ruling given in "Opinion" 99 : Immediately after the close of the Thirteenth International Congress of Zoology, Dr. Ellsworth C. Dougherty visited London and on 6th August 1948 called at the Secretariat of the Commission for the purpose of discussing with Mr. Hemming the problems involved in the suggested revision of *Opinion* 99. It was then agreed that certain revisions of Dr. Dougherty's application of 1946 were required, in order, for example, to take account of the decisions by the Paris Congress to establish an *Official List of Specific Names in Zoology* (then styled the *Official List of Specific Trivial Names in Zoology*) and *Official Indexes of Rejected and Invalid Names* (both generic and specific). Dr. Dougherty's application so revised was received in the Spring of 1950. It forms the second of the three documents which collectively constitute the documentation submitted to the Commission in the matter of the revision of *Opinion* 99. It has been reproduced in paragraph 2 of the present *Opinion*.

9. Submission of the Report called for in 1948 : In pursuance of the decision taken by the International Commission at its Paris Session (paragraph 7 above), Mr. Hemming, as Secretary, carried out in 1950 a review of the available material relating to the problems involved in the Ruling given in *Opinion* 99, and in the light of that review prepared a Report, with recommendations, for the consideration of the Commission. This Report, the recommendations in which were agreed in draft between Mr. Hemming, Professor Kirby and Dr. Dougherty, forms the third and concluding portion of the documentation relating to the present case. It has been reproduced in paragraph 3 of the present *Opinion*.

10. Publication of the documentation relating to the review of the Ruling given in "Opinion" 99 : The three documents which constitute the documentation relating to the proposed review of the Ruling given in *Opinion* 99 were sent to the printer in December 1950 and were published on 15th August 1951 in Double-Part 9/10 of volume 2 of the *Bulletin of Zoological Nomenclature* (Kirby, 1951, *Bull. zool. Nomencl.* 2 : 243—252 ; Dougherty, 1951, *ibid.* 2 : 253—276 ; Hemming, 1951, *ibid.* 2 : 277—281).

11. Issue of Public Notices : Under the revised arrangements approved by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 15th August 1951, both in Double-Part 9/10 of volume 2 of the *Bulletin of Zoological Nomenclature*, the Part in which the three papers which collectively constitute the application in the present case were published, and to the other prescribed serial publications. In addition, Public Notice was given to certain other zoological and specialist serial publications. The publication of these Notices elicited only the comment reproduced in the immediately following paragraph.

12. Comment received from Dr. G. F. Otto (The Johns Hopkins University, School of Hygiene and Public Health, Department of Parasitology, Baltimore, Maryland, U.S.A.) : On 21st December 1951 Dr. G. F. Otto (*The Johns Hopkins University, School of Hygiene and Public Health, Department of Parasitology, Baltimore, Maryland, U.S.A.*) submitted the following letter commenting upon the proposals submitted for the revision of *Opinion* 99 :—

I am rather belatedly writing to you concerning the announcement in the October 26 issue of *Science* to the effect that the International Commission will reconsider the question of the generic name of *E. histolytica*⁷. I should like to call attention to the fact that it seems to me that the earlier decision of the Commission as written by the late Dr. Charles W. Stiles, who was then the Secretary, transcended the authority of the Commission. In effect, the decision said that *histolytica* and *coli* of Man are in the same genus with *blattae* of the cockroach. It does not seem to me that the Commission has any such authority. All it could have done was to have said that, if those are in the same genus, then the spelling *Endamoeba* would be the correct generic name. Accordingly, it seems to me that that would be the appropriate decision for the present Commission but that the Commission should go further and say that, if they are not in the same genus, then *Entamoeba* is the correct spelling for *histolytica* and *coli* of Man. If the cockroach and the two forms mentioned from Man are in

⁷ As it was evident from this passage that Dr. Otto had seen only the abbreviated notice published in *Science*, the Secretary, in replying (on 13th February, 1952) drew his attention to the detailed proposals which had been published in the *Bulletin of Zoological Nomenclature*.

separate genera and *Entamoeba* is not to be retained for the amoeba of Man, then one of the other names such as *Poneramoeba*, not *Endamoeba* would be the correct name. It is perhaps unfortunate that the two spellings *Entamoeba* and *Endamoeba* are so similar, but one does not resolve the matter by attempting to suppress one genus which is in effect what the earlier ruling of the Commission has done.

I am writing to you in this vein because it is not absolutely clear to me what the current recommendation of the Commission is. I gather that you are proposing to establish *Entamoeba* as a generic name for the organisms of Man and to this I wholly subscribe. On the other hand, since you use the statement "action designated to validate existing practices", I might call you attention to the fact that existing practice in American medical literature is to use *Endamoeba* and that it is thoroughly entrenched. It is for that reason that I take the liberty of writing you since there is possible ambiguity in your phraseology. I grant that in most scientific circles in America and abroad *Entamoeba* is accepted as correct but it is not universally accepted.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

13. Issue of Voting Paper V.P.(52)32 : On 9th May 1952, a Voting Paper V.P.(52)32 was issued in which the Members of the Commission were invited to vote either for, or against the proposal "relating to the name *Entamoeba* Casagrandi & Barbagallo, 1895, and associated problems, as specified in Points (1) to (8) in paragraph 8 on pages 279 to 281 of volume 2 of the *Bulletin of Zoological Nomenclature*" [*i.e.*, in paragraph 8 of the Secretary's Report reproduced in paragraph 3 of the present *Opinion*].

14. The prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the prescribed Voting Period closed on 9th August 1952.

15. Particulars of the Voting on Voting Paper V.P.(52)32 : The state of the voting on Voting Paper V.P.(52)32 at the close of the prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Riley ; Dymond ; Calman ; Hankó ; Bonnet ; Vokes ; do Amaral ; Boschma ; Pearson⁸ ; Hemming ; Bradley ; Esaki ; Lemche ; Stoll ; Cabrera ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned two (2) :*

Jaczewski ; Mertens.

16. Declaration of Result of Vote : On 10th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)32, signed a Certificate that the Votes cast were as set out in paragraph 15 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

17. On 25th March 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)32.

⁸ Commissioner Pearson exercised in this case the right conferred by the Thirteenth International Congress of Zoology, Paris, 1948, under which a Commissioner may, if he so desires, signify his willingness to support the view, or the majority view, of other members of the Commission (1950, *Bull. zool. Nomencl.*, 4 : 50—51).

18. Original References : The following are the original references for the names placed or confirmed on *Official Lists* and placed on *Official Indexes* by the Ruling given in the present *Opinion* :—

- blattae*, *Endamoeba*, Leidy, 1878, *Z. wiss. Zool.* **30** (2) : 273—277
coli, *Amoeba*, Lösch, 1875, *Virchows Arch. path. Anat.* **65** [6s, 5] (2) : 208 pl. 10 figs. 1—3
coli, *Amoeba*, Grassi, 1879, *Gazz. med. lombarda* **39** [8s. 1] (45) : 445
dysenteriae, *Amoeba*, Councilman & Lafleur, 1891, *Johns Hopkins Hosp. Rep.* **2** (7/9) : 405
dysenterica, *Amoeba*, Pfeiffer, 1888, *Corresp. Bl. allgem. ärztl. Ver. Thüringen* **17** (11) : 662
Endamoeba Leidy, 1879, *Proc. Acad. nat. Sci. Philad.* **1879** : 205
Entamoeba Casagrandi & Barbagallo, 1895, *Boll. Acad. Gioenia Sci. nat. Catania* (n.s.) **1895** (41) : 18
histolytica, *Entamoeba*, Schaudinn, 1903, *Arb. Gesundheitsamt. Berlin* **19** (3) : 564
intestinalis, *Amoeba*, Blanchard, 1885, *Traité Zool. médic.* **1** : 15
Löschia Chatton & Lalung-Bonnaire, 1912, *Bull. Soc. Path. exot.* **5** (2) : 142
Poneramoeba Lühe, 1909, *Schr. phys.-ökon. Ges. Königsb.* **49** : 421
urogenitalis, *Amoeba*, Baelz, 1883, *Berl. klin. Wschr.* **20** (16) : 237
vaginalis, *Amoeba*, Blanchard, 1885, *Traité Zool. médic.* **1** : 15

19. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

20. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression “trivial name” and the *Official List* reserved for recording such names was styled the *Official List of Specific*

Trivial Names in Zoology, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

21. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

22. The present *Opinion* shall be known as *Opinion* Three Hundred and Twelve (312) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Fifth day of March, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

**OPINIONS AND DECLARATIONS
RENDERED BY THE INTER-
NATIONAL COMMISSION ON
ZOOLOGICAL NOMENCLATURE**

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

VOLUME 9. Part 2. Pp. 61—70

OPINION 313

Designation, under the Plenary Powers, of a type species
for the genus *Eysarcoris* Hahn, 1834 (Class Insecta,
Order Hemiptera) in harmony with accustomed
nomenclatorial usage



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 313

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 313

DESIGNATION UNDER THE PLENARY POWERS OF A TYPE SPECIES FOR THE GENUS "EYSARCORIS" HAHN, 1834 (CLASS INSECTA, ORDER HEMIPTERA) IN HARMONY WITH ACCUSTOMED NOMEN- CLATORIAL USAGE

RULING :—(1) Under the Plenary Powers, (a) all selections of type species for the genus *Eysarcoris* Hahn, 1834 (Class Insecta, Order Hemiptera) made prior to the present Ruling are hereby set aside, and (b) the nominal species *Cimex aeneus* Scopoli, 1763, is hereby designated to be the type species of the foregoing genus.

(2) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* as Name No. 756 : *Eysarcoris* Hahn, 1834 (gender : masculine) (type species, by designation, under the Plenary Powers, under (1)(b) above : *Cimex aeneus* Scopoli, 1763).

(3) The under-mentioned specific name is hereby placed on the *Official List of Specific Names in Zoology* as Name No. 179 : *aeneus* Scopoli, 1763, as published in the combination *Cimex aeneus*.

I. THE STATEMENT OF THE CASE

On 8th February 1946, Dr. W. E. China (*British Museum (Natural History), London*) submitted an application for the use of the Plenary Powers for the purpose of designating a type

species for the genus *Eysarcoris* Hahn, 1834 (Class Insecta, Order Hemiptera) in harmony with accustomed nomenclatorial usage. For the reasons explained in paragraph 3 below, it was found necessary later slightly to revise the application so submitted. The application so revised was as follows :—

**Proposed use of the Plenary Powers to vary the type species of the genus
“*Eysarcoris*” Hahn, 1834 (Class Insecta, Order Hemiptera),
in order to validate existing nomenclatorial practice**

By W. E. CHINA, Sc.D.

(Deputy Keeper, Department of Entomology, British Museum (Natural History), London)

1. The object of the present application is to seek the help of the International Commission on Zoological Nomenclature in preventing the confusion which would inevitably arise if the *Règles* were strictly applied in the case of the generic name *Eysarcoris* Hahn, 1834 (Class Insecta, Order Hemiptera).

2. The relevant facts are as follows : The generic name *Eysarcoris* Hahn, 1834 (*Wanzenart. Ins.* 2 : 66) was established without a designated or indicated type species ; one of the species included in it by Hahn was *Cimex punctatus* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) 1 : 444). This species was selected as the type species by Desmarest in 1845 (*in Orbigny, Dict. univ. Hist. nat.* (Disciples' ed.) 5 : 526). This selection, being the first to have been made, is valid under the *Règles*. It has not, however, been accepted by hemipterists who have followed Distant, who in 1902 (*Faun. Brit. Ind.*, Rhyn. 1 : 165) selected *Cimex perlatus* Fabricius, 1794 (*Ent. syst.* 4 : 125) (i.e., *Cimex aeneus* Scopoli, 1763 *Ent. carn.* : 122) as the type species of this genus.

3. The acceptance of Desmarest's selection of *Cimex punctatus* Linnaeus as the type species of the genus *Eysarcoris* Hahn would cause much more confusion than uniformity in the generic names in the family PENTATOMIDAE, for it would involve not only the loss of the well-known generic name *Rhacognathus* Fieber, [1860] (*Europ. Hem.* : 81, 347) (which would be replaced by the name *Eysarcoris* Hahn), but also the transfer of the long-established generic name *Eysarcoris* Hahn from the sub-family PENTATOMINAE to the sub-family ASOPINAE, and the replacement in the PENTATOMINAE of the name *Eysarcoris* Hahn by the little-used generic name *Stollia* Ellenrieder, 1862 (*Nat. Tijdschr. ned. Ind.* 24 : 149). This latter genus has, as its type species by monotypy, an Oriental species *Stollia fuliginosa* Ellenrieder, 1862, which is only doubtfully congeneric with the European species now (incorrectly) referred to the genus *Eysarcoris* Hahn.

4. In order to avoid the confusion and uncertainties described above, I ask the International Commission on Zoological Nomenclature :—

(1) to use its Plenary Powers :—

(a) to set aside all selections of type species for the genus *Eysarcoris* Hahn, 1834, made prior to the proposed decision ;

(b) to designate *Cimex aeneus* Scopoli, 1763, to be the type species of the foregoing genus ;

(2) to place the generic name *Eysarcoris* Hahn, 1834 (type species, by designation under the Plenary Powers, as proposed in (1)(b) above : *Cimex aeneus* Scopoli, 1763) on the *Official List of Generic Names in Zoology* (gender of generic name : masculine) ;

(3) to place the trivial name *aeneus* Scopoli, 1763, as published in the binominal combination *Cimex aeneus*, on the *Official List of Specific Trivial Names in Zoology*.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Dr. China's application, the problem of the species to be accepted as the type species of the genus *Eysarcoris* Hahn, 1834, was allotted the Registered Number Z.N.(S.)212.

3. Situation in the period 1946—1950 : Owing to difficulties arising from paper rationing, shortage of labour at the printing works and similar causes, it was not possible for the Commission to arrange for the publication of the present application in the *Bulletin of Zoological Nomenclature* in the period immediately following its receipt. In the short amount of time at its disposal during its Session held in Paris in 1948 the International Commission on Zoological Nomenclature was not able to consider all the applications then awaiting attention, and the present was one of the applications which for this reason was not placed before the Commission on that occasion. For the next eighteen

months the preparation and publication of the Official Records of the Paris Meetings taxed the resources of the Commission to the uttermost, and it was accordingly not until the latter part of 1950 that it was possible to resume preparations for the publication in the *Bulletin of Zoological Nomenclature* of applications on individual nomenclatorial problems submitted by specialists for decision. The present was among the earliest of the applications to be taken up in this way. In September 1950, the present application was revised to the small extent necessary in order to take account of the decision by the Thirteenth International Congress of Zoology, Paris, 1948, to establish an *Official List of Specific Names in Zoology* (then styled the *Official List of Specific Trivial Names in Zoology*). The application so revised was received on 23rd September 1950 and was sent to the printer on 4th December 1950.

4. Publication of the present application : The present application was published on 15th August 1951 in Double-Part 9/10 of volume 2 of the *Bulletin of Zoological Nomenclature* (China, 1951, *Bull. zool. Nomencl.* **2** : 294—295).

5. Issue of Public Notices : Under the revised arrangements approved by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 15th August 1951 both in Double-Part 9/10 of volume 2 of the *Bulletin of Zoological Nomenclature*, the Part in which Dr. China's application was published, and also to the other prescribed serial publications. In addition, Public Notice was given to certain entomological serial publications in Europe and America. The publication of these Notices elicited no objection to the action proposed.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

6. Issue of Voting Paper V.P.(52)33 : On 9th May 1952, a Voting Paper (V.P.(52)33) was issued in which the Members of

the Commission were invited to vote either for, or against, the proposal "relating to the name *Eysarcoris* Hahn, 1834, as specified in Points (1) to (3) at the foot of page 294 and at the top of page 295 of volume 2 of the *Bulletin of Zoological Nomenclature*" [i.e., in paragraph 4 of the application reproduced in the first paragraph of the present *Opinion*].

7. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 9th August 1952.

8. Particulars of the Voting on Voting Paper V.P.(52)33 : The state of the voting on Voting Paper V.P.(52)33 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Riley ; Dymond ; Calman ; Hankó ; Bonnet ; Vokes ; do Amaral ; Bradley ; Boschma ; Pearson¹ ; Hemming ; Esaki ; Lemche ; Stoll ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned, three (3) :*

Cabrera ; Jaczewski ; Mertens.

¹ Commissioner Pearson exercised in this case the right conferred by the Thirteenth International Congress of Zoology, Paris, 1948, under which a Commissioner may, if he so desires, signify his willingness to support the view, or the majority view, of other members of the Commission (1950, *Bull. zool. Nomencl.*, 4 : 50—51).

9. Declaration of Result of Vote : On 10th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)33, signed a Certificate that the Votes cast were as set out in paragraph 8 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

10. On 27th March 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)33.

11. The following are the original references for the names placed on *Official Lists* by the Ruling given in the present *Opinion* :—

aeneus, *Cimex*, Scopoli, 1763, *Ent. carn.* : 122
Eysarcoris Hahn, 1834, *Wanzenart. Ins.* 2 : 66

12. The nominal genus *Eysarcoris* Hahn, 1834, is not the type genus of a family-group taxon and accordingly no question arises in the present case of placing any name on the *Official List of Family-Group Names in Zoology*.

13. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the

expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

14. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

15. The present *Opinion* shall be known as *Opinion* Three Hundred and Thirteen (313) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Seventh day of March, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 3. Pp. 71—80



OPINION 314

Validation, under the Plenary Powers, of the specific name *acuminata* Ioff & Tiflov, 1946, as published in the combination *Rhadinopsylla (Rectofrontia) acuminata*, as applied to the species numbered " 66 " by those authors (Class Insecta, Order Siphonaptera)

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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 314

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History),
Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 314

VALIDATION, UNDER THE PLENARY POWERS, OF THE SPECIFIC NAME "ACUMINATA" IOFF & TIFLOV, 1946, AS PUBLISHED IN THE COMBINATION "RHADINOPSYLLA (RECTOFRONTIA) ACUMINATA", AS APPLIED TO THE SPECIES NUMBERED "66" BY THOSE AUTHORS (CLASS INSECTA, ORDER SIPHONAPTERA)

RULING :—(1) Under the Plenary Powers, (a) the specific name *acuminata* Ioff & Tiflov, 1946, as inadvertently published in the combination *Rhadinopsylla (Rectofrontia) acuminata* and applied to the species there cited by those authors under the number "62" is hereby suppressed for the purposes both of the Law of Priority and of the Law of Homonymy, and (b) the same specific name (i) as published by the foregoing authors on the same page of the same work and in the same combination and (ii) as deliberately applied by those authors to the species cited by them under the number "66" is hereby validated.

(2) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Names Nos. 180 and 181 respectively : (a) the specific name *acuminata* Ioff & Tiflov, 1946, as published in the combination *Rhadinopsylla (Rectofrontia) acuminata*, as applied by the authors to the species there numbered "66", and as validated, under the Plenary Powers, under (1)(b) above ; (b) the subspecific name *transbaikalica* Ioff & Tiflov, 1946, as published in the combination *Rhadinopsylla (Ralipsylla) li transbaikalica*, as a substitute name for *Rhadinopsylla (Rectofrontia) acuminata*, a name (i) applied in error to the species numbered "62" by the foregoing authors and (b) suppressed, under the Plenary Powers, under (1)(a) above.

(3) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Name No. 86 :—the specific name *acuminata* Ioff & Tiflov, 1946, as published in the combination *Rhadinopsylla (Rectofrontia) acuminata* and applied by the foregoing authors to the species numbered “ 62 ” by them, as suppressed, under the Plenary Powers, under (1)(a) above.

I.—THE STATEMENT OF THE CASE

On 14th September 1950, Mr. G. H. E. Hopkins (*British Museum (Natural History), Zoological Museum, Tring, Herts, England*) submitted the following application in which he drew attention to the fact by some inadvertence Ioff and Tiflov had in 1946 published the specific name *acuminata* in the combination *Rhadinopsylla (Rectofrontia) acuminata* as a name for two species of fleas on the same page of the same work and asked that the Commission should use its Plenary Powers for the purpose of validating the second of the two foregoing usages of the above name, it being evident that this was the usage which had been intended by these authors :—

Proposed use of the Plenary Powers to validate the specific trivial name
“ acuminata ” Ioff & Tiflov, as published in the combination
“ Rhadinopsylla (Rectofrontia) acuminata ” as applied to the
species numbered “ 66 ” by those authors (Class Insecta,
Order Siphonaptera)

By G. H. E. HOPKINS, O.B.E., M.A.

(*British Museum (Natural History), Zoological Museum, Tring, Herts.*)

1. Ioff (*in* Ioff, Tiflov, *et al.*, 1946, *Med. Parasitol. Moscow*, 15 (No. 4) : 91) published a subgenus *Ralipsylla* of *Rhadinopsylla*. On the following page he and other authors published numerous new species or subspecies which are numbered, numbers 60, 61 and 63 being referred to the subgenus *Ralipsylla* and 64 to 68 inclusive to the subgenus *Rectofrontia*. But both No. 62 and No. 66 are called “ *Rhadinopsylla (Rectofrontia) acuminata* Ioff et Tiflov ”, and this is the first time

this name has been published. Obviously one of these duplicate names must be a *lapsus calami*, and it is clear from the context which is the error, because No. 62 is sandwiched in among forms of *Ralipsylla* whereas No. 66 is correctly placed among forms of *Rectofrontia*; it is, therefore No. 66 to which the name *acuminata* was intended to apply. Moreover, in the separates of the paper (but not in the original publication) the name of No. 62 is altered in manuscript, presumably by Professor Ioff, to *Rhadinopsylla (Ralipsylla) li transbaikalica* Ioff et Tiflov. This manuscript alteration does not, of course, constitute publication, but in No. 6 of the same periodical and volume, also published in 1946, there is (:94) a list of corrections of misprints in the original paper, among which is the statement that the name of species No. 62 on p. 92 of the original paper should be *Rhadinopsylla (Ralipsylla) li transbaikalica* Ioff et Tiflov, not *Rhadinopsylla (Rectofrontia) acuminata* Ioff et Tiflov as printed.

2. In these circumstances the strict applications of the *Règles* to the present case would serve no useful purpose whatever: (1) it would involve the pedantic acceptance of something which was undoubtedly an error (namely, the application of the name *Rhadinopsylla (Rectofrontia) acuminata* Ioff and Tiflov, 1946, to the species to which those authors applied the number "62") and the equally pedantic rejection, as a homonym, of the same name as deliberately applied by those authors to the entirely different species referred to by them as species number "66"; (2) such action would lead to confusion in the nomenclature of these fleas, since the Russian workers would certainly not follow the strict application of the *Règles* in this matter. The present is therefore, in my opinion, pre-eminently a case where it would be appropriate for the International Commission on Zoological Nomenclature to use its Plenary Powers to give valid force to the evident intention of Ioff and Tiflov, when they wrote their paper in 1946, and to the consequent current practice of specialists in this group, for such action would promote uniformity and prevent the confusion which would otherwise occur in the nomenclature of this group. The proposal which I therefore now place before the Commission is that it should:—

(1) use its Plenary Powers:—

- (a) to suppress for the purposes both of the Law of Priority and of the Law of Homonymy the trivial name *acuminata* Ioff and Tiflov, 1946, *Med. Parasitol. Moscow* **15** (No. 4) : 91 as inadvertently published in the combination *Rhadinopsylla (Rectofrontia) acuminata*, and applied to the species there cited by those authors under the number "62";
- (b) to validate the foregoing trivial name (a) as published by the foregoing authors on the same page of the same work and in the same combination and (b) as deliberately applied by those authors to the species cited by them under the number "66";

- (2) place on the *Official List of Specific Trivial Names in Zoology* (i) the trivial name *acuminata* Ioff and Tiflov, 1946, as published in the combination *Rhadinopsylla (Rectofrontia) acuminata*, as validated under (1)(b) above ; (ii) the subspecific trivial name *transbaikalica* Ioff and Tiflov, 1946, as published in the trinominal combination *Rhadinopsylla (Ralipsylla) li transbaikalica* (1946, *Med. Parasitol. Moscow*, **15** (No. 6) : 94) as a substitute name for *Rhadinopsylla (Rectofrontia) acuminata* applied in error to species No. 62 in *loc. cit.* (No. 4) : 91, suppressed under 1(a) above.
- (3) place on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology* the trivial name *acuminata* Ioff and Tiflov, 1946, as inadvertently published in the combination *Rhadinopsylla (Rectofrontia) acuminata*, as suppressed under (1)(a) above.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : Upon the receipt of Mr. Hopkins' application, the problem of the accidental homonymy arising from the publication by Ioff and Tiflov in 1946 of the specific name *acuminata* in the combination *Rhadinopsylla (Rectofrontia) acuminata* for two species of flea was allotted the Registered Number Z.N.(S.)386.

3. Publication of the present application : The present application was sent to the printer on 1st January 1951 and was published on 15th August 1951 in Double-Part 9/10 of volume 2 of the *Bulletin of Zoological Nomenclature* (Hopkins, 1951, *Bull. zool. Nomencl.* **2** : 296—297).

4. Issue of Public Notices : Under the revised arrangements approved by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 15th August 1951, both in Double-Part 9/10 of volume 2 of the *Bulletin of Zoological Nomenclature*, the Part in which Mr. Hopkins' application was published, and also

to the other prescribed serial publications. In addition, Public Notice was given to a number of entomological serial publications in Europe and America. The publication of these Notices elicited no objection to the action proposed.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

5. Issue of Voting Paper V.P.(32)34 : On 9th May 1952, a Voting Paper (V.P.(52)34) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the name *acuminata* Ioff & Tiflov, 1946, as published in the combination *Rhadinopsylla (Rectofrontia) acuminata*, as specified in Points (1) to (3) on page 297 of volume 2 of the *Bulletin of Zoological Nomenclature*" [i.e., in the Points set out in paragraph 2 of the application reproduced in the first paragraph of the present *Opinion*].

6. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 9th August 1952.

7. Particulars of the Voting on Voting Paper V.P.(52)34 : The state of the voting on Voting Paper V.P.(52)34 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Riley ; Dymond ; Calman ; Hankó ;
 Bonnet ; Vokes ; do Amaral ; Boschma ; Pearson¹ ;
 Hemming ; Bradley ; Esaki ; Lemche ; Stoll ;
 Cabrera ;

¹ Commissioner Pearson exercised in this case the right conferred by the Thirteenth International Congress of Zoology, Paris, 1948, under which a Commissioner may, if he so desires, signify his willingness to support the view, or the majority view, of other members of the Commission (1950, *Bull. zool. Nomencl.* 4 : 50—51).

(b) *Negative Votes* :

None ;

(c) *Voting Papers not returned, two (2)* :

Jaczewski ; Mertens.

8. Declaration of Result of Vote : On 10th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)34, signed a Certificate that the Votes cast were as set out in paragraph 7 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

9. On 27th March 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)34.

10. The following are the original references for the names placed on the *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

- acuminata*, *Rhadinopsylla* (*Rectofrontia*), Ioff & Tiflov, 1946,
Med. Parasitol. Moscow **15** (No. 4) : 91, no. 62
acuminata, *Rhadinopsylla* (*Rectofrontia*), Ioff & Tiflov, 1946,
Med. Parasitol. Moscow **15** (No. 4) : 91, no. 66
transbaikalica, *Rhadinopsylla* (*Ralipsylla*) *li*, Ioff & Tiflov, 1946,
Med. Parasitol. Moscow **15** (No. 6) : 94

11. As the present case is concerned only with certain specific names and no question of the status of generic names is involved, the question of placing names on the *Official List of Family-Group Names in Zoology* does not arise.

12. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

13. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

14. The present *Opinion* shall be known as *Opinion* Three Hundred and Fourteen (314) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Seventh day of March, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

**OPINIONS AND DECLARATIONS
RENDERED BY THE INTER-
NATIONAL COMMISSION ON
ZOOLOGICAL NOMENCLATURE**

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

VOLUME 9. Part 4. Pp. 81—90

OPINION 315

Addition of the generic name *Spirula* Lamarck, 1799
(Class Cephalopoda) to the *Official List of Generic Names
in Zoology*



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 315

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

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Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

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Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 315

ADDITION OF THE GENERIC NAME "SPIRULA" LAMARCK, 1799 (CLASS CEPHALOPODA) TO THE "OFFICIAL LIST OF GENERIC NAMES IN ZOOLOGY"

RULING :—(1) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* as Name No. 757 :—*Spirula* Lamarck, 1799 (gender : feminine) (type species, by monotypy : *Nautilus spirula* Linnaeus, 1758) (Class Cephalopoda).

(2) The under-mentioned specific name is hereby placed on the *Official List of Specific Names in Zoology* as Name No. 182 :—*spirula* Linnaeus, 1758, as published in the combination *Nautilus spirula* (specific name of type species of *Spirula* Lamarck, 1799).

(3) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Names Nos. 160 and 161, and 167 to 169 respectively :—(a) *Spirulea* Péron & Lesueur, 1807 (an Invalid Emendation of *Spirula* Lamarck, 1799) ; (b) *Spirulaea* Agassiz (J.L.R.), 1845 (an Invalid Emendation of *Spirula* Lamarck, 1799) ; (c) *Lituina* Link, 1807 (a junior objective synonym of *Spirula* Lamarck, 1799) ; (d) *Spirulaea* Oken, 1815 (a junior objective synonym of *Spirula* Lamarck, 1799) ; (e) *Spirulaeus* Duméril, 1806 (a junior objective synonym of *Spirula* Lamarck, 1799).

(4) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Name No. 87 :—*fragilis* Lamarck, 1801, as published in the combination *Spirula fragilis* (a junior objective synonym of *spirula* Linnaeus, 1758, as published in the combination *Nautilus spirula*).

I.—THE STATEMENT OF THE CASE

On 22nd March 1949, Mr. R. Winckworth (*London*) submitted to the Commission the following application for the addition of the generic name *Spirula* Lamarck, 1799 (Class Cephalopoda) to the *Official List of Generic Names in Zoology* :—

Application for the addition of the name “*Spirula*” Lamarck, 1799 (Class Cephalopoda) to the “*Official List of Generic Names in Zoology*” and matters incidental thereto

By R. WINCKWORTH (*London*)

1. Application is hereby made for the International Commission on Zoological Nomenclature to place the name *Spirula* Lamarck, 1799 (*Mém. Soc. Hist. nat. Paris* 1799 : 80) (gender of name : feminine) on the *Official List of Generic Names in Zoology*. The only species then placed in this genus by Lamarck was *Nautilus spirula* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) 1 : 710), which is therefore the type species by monotypy.

2. Apart from the use of the spelling *Spirulea* by Péron and Lesueur in 1807 (*Voy. Aust.*, Atlas 1 : pl. xxx) and by Oken in 1815 (*Lehrbuch Naturgesch.* 3(1) : 333) and the emendation of that spelling to *Spirulaea* by Agassiz (L.) in 1845 (*Nomencl. zool.* (Moll.)), and the use for this genus of the name *Lituus* Cuvier, 1817 (*Règn. anim.* 2 : 369), by Gray in 1849 in a catalogue, the entire literature since the time of Lamarck refers to this genus under the name *Spirula*. The variants *Spirulea* and *Spirulaea* should be placed on the *Official Index of Rejected and Invalid Generic Names* at the same time that the name *Spirula* Lamarck is placed on the *Official List*.

3. The trivial name *spirula* Linnaeus, 1758, as published in the binominal combination *Nautilus spirula*, is the oldest available name for the type species of *Spirula* Lamarck and should be placed on the *Official List of Specific Trivial Names* at the same time that the name *Spirula* Lamarck is placed on the *Official List of Generic Names*. In 1801 (*Syst. Anim. sans Vertèbr.* : 102) Lamarck renamed this species *Spirula fragilis*; the invalid trivial name *fragilis* Lamarck, 1801, should be placed on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. **Registration of the present application** : On the receipt of Mr. Winckworth's application, the question of the addition of the generic name *Spirula* Lamarck, 1799, to the *Official List of Generic Names in Zoology* was allotted the Registered Number Z.N.(S.)416.

3. Publication of the present application : At the time of the receipt of Mr. Winckworth's application the resources of the Commission were wholly devoted to the preparation and publication of the Official Records of the Session held by the Commission in Paris in 1948 and it was not until the autumn of 1950 that it was possible to resume arrangements for the publication in the *Bulletin of Zoological Nomenclature* of applications relating to individual nomenclatorial problems. Mr. Winckworth's application was sent to the printer in March 1951 and was published on 15th August 1951 in Double-Part 9/10 of volume 2 of the *Bulletin* (Winckworth, 1951, *Bull. zool. Nomencl.* 2 : 298). The publication of this application elicited no objection to the action proposed.

4. Support received from Mr. Leslie Bairstow (British Museum (Natural History), London) : On 29th March 1952 Mr. Leslie Bairstow (*British Museum (Natural History), London*) addressed to the Commission the following letter in support of the present application :—

1. If it is not too late, I should like to support Mr. R. Winckworth's application (which has only recently come to my notice) for the addition of the name *Spirula* Lamarck, 1799, to the *Official List of Generic Names in Zoology*.

2. *Spirula* is one of the genera the nomenclature of which I have had occasion to investigate for the section on dibranchiate cephalopods for the international *Treatise on Invertebrate Paleontology*. The conclusions that I have reached independently agree to a large extent with those of Mr. Winckworth, and only a few points call for comment.

(a) L. Agassiz, 1845, was by no means the first author to introduce the generic name *Spirulaea*. This name had already been applied to *Spirula* by Oken, 1835 (*Allgemeine Naturgeschichte* 5(1) : 531), who had referred to the genus only the single nominal species *Nautilus spirula*. By monotypy, therefore, this species is type species of *Spirulaea* Oken, 1835, which is thus an objective synonym of *Spirula* Lamarck, 1799. Furthermore, however, *Spirulaea* Oken, 1835, is an absolute homonym of *Spirulaea* Bronn, 1828 (*Taschenb. Min.* 21(2) [*Z. Min.* 1827] : 544), which is either an annelid or a vermetid gastropod ; whilst under the revised Article 34, *Spirulaea* Bronn, 1828, is itself an effective homonym of *Spirulea* Péron and Lesueur, 1807.¹

¹This statement was correct at the time when it was written, but at Copenhagen in 1953 the Fourteenth International Congress of Zoology amended Article 34 to provide that : "A generic name is not to be treated as a homonym of another such name if it differs from it in spelling by even one letter." (1953, *Copenhagen Decisions Zool. Nomencl.* : 78, Decision 152).

(b) It is true that almost the entire literature since Lamarck, 1799, refers to the genus *Spirula* by that name, but Mr. Winckworth's list of exceptions was by no means complete. In particular it should be noted that among the synonyms of *Spirula* are *Spirularius*, *Lituina* and *Spirulites*.

3. *Spirularius* Duméril, 1806 (*Zoologie analytique* : 157) was established with no nominal species distinctly referred to it, but in a translation with additions published later in the same year by L. F. Froriep, 1806 (*C. Duméril's . . . Analytische Zoologie* : 157) *Nautilus spirula* L. was quoted as sole example of *Spirularius*, and this species, as the first nominal species subsequently referred to *Spirularius*, is automatically its type species. *Spirularius* Duméril, 1806, is thus an objective synonym of *Spirula* Lamarck, 1799.

4. *Lituina* Link, 1807 (*Beschreibung der Naturalien-Sammlung der Universität zu Rostock*. Abt. 2 : 84) was established with a single species *L. spirula* = *Nautilus spirula* Linnaeus, which is therefore type species by monotypy. *Lituina* Link, 1807, is thus an objective synonym of *Spirula* Lamarck, 1799.

5. *Spirulites* Parkinson, 1811 (*Organic Remains of a Former World* 3 : 110) was established for fossil shells of the genus *Spirula* Lamarck, and is thus an objective synonym of *Spirula* Lamarck, 1799, even though applied by Parkinson to specimens, not specifically named, that would not now be regarded as falling within the limits of *Spirula*.

6. The names *Spirularius*, *Lituina* and *Spirulites*, as well as *Spirulea* and *Spirulaea*, should be put on the *Official Index of Rejected and Invalid Generic Names* at the same time that the name *Spirula* Lamarck is put on the *Official List*.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

5. **Issue of Voting Paper V.P.(52)35** : On 9th May 1952, Mr. Hemming, as Secretary, issued a Voting Paper (V.P.(52)35) to the Members of the Commission in regard to the present application. In doing so, Mr. Hemming added a note that Mr. Winckworth, the applicant in this case, had unfortunately died before having had an opportunity to formalise his application in a form convenient for the Commission to vote upon it, and that, to remedy this defect, he (Mr. Hemming) had prepared the required summary which he had caused to be typed at the foot of the

Voting Paper then issued. In that Voting Paper the Members of the Commission were invited to vote either for, or against, "the proposal relating to the name *Spirula* Lamarck, 1799, submitted by the late Mr. R. Winckworth, as summarised at the foot of the present Voting Paper in the light of the application published on page 298 of volume 2 of the *Bulletin of Zoological Nomenclature*". The following is the summary referred to above :—

Summary of Mr. Winckworth's proposal in the present case :

The International Commission is asked :—

- (1) to place the name *Spirula* Lamarck, 1799 (gender of name : feminine) (type species, by monotypy : *Nautilus spirula* Linnaeus, 1758), on the *Official List of Generic Names in Zoology* ;
- (2) to place the trivial name *spirula* Linnaeus, 1758, as published in the combination *Nautilus spirula*, on the *Official List of Specific Trivial Names in Zoology* ;
- (3) to place on the *Official Index of Rejected and Invalid Generic Names in Zoology* the following objectively invalid spelling variants of the name *Spirula* Lamarck : (a) *Spirulea* Péron and Lesueur, 1807 ; (b) *Spirulaea* Agassiz (L.), 1845 ;
- (4) to place the trivial name *fragilis* Lamarck, 1801, as published in the combination *Spirula fragilis*, an objective junior synonym of *spirula* Linnaeus, 1758, as published in the combination *Nautilus spirula*, on the *Official Index of Rejected and Invalid Specific Names in Zoology*.

6. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 9th August, 1952.

7. Particulars of the Voting on Voting Paper V.P.(52)35 : The state of the voting on Voting Paper V.P.(52)35 at the close of the Prescribed Voting Period was as follows :—

- (a) *Affirmative Votes had been given by the following seventeen (17) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Riley ; Dymond ; Calman ; Hankó ; Bonnet ; Vokes ; do Amaral ; Bradley ; Boschma ; Pearson ; Hemming ; Esaki ; Lemche ; Mertens ; Stoll ; Cabrera ;

(b) *Negative Votes* :

None ;

(c) *Voting Paper not returned, one* (1) :

Jaczewski.

8. Declaration of Result of Vote : On 10th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)35, signed a Certificate that the Votes cast were as set out in paragraph 7 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

9. Addition to the " Official Index of Rejected and Invalid Generic Names in Zoology " of three junior objective synonyms of " Spirula " Lamarck, 1799 : On 29th March 1954 Mr. Hemming, as Secretary, placed the following Minute on the Commission's File Z.N.(S.) 416 :—

" Spirula " Lamarck, 1799 : addition of three junior objective synonyms to the " Official Index of Rejected and Invalid Generic Names in Zoology "

MINUTE by FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

I regret that through an oversight the recommendations submitted with Voting Paper V.P.(52)35 referred only to the proposals submitted by the late Mr. Winckworth and did not take account of the communication received from Mr. Leslie Bairstow drawing attention to the existence of other junior objective synonyms of the generic name *Spirula* Lamarck, 1799. In view of the decision taken by the Commission on the foregoing Voting Paper these names must, under the General Directive given to the Commission by the International Congress of Zoology, now be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*.

2. I accordingly hereby direct that in the Ruling to be given in pursuance of the decision taken by the Commission on Voting Paper V.P.(52)35 the following additional names, each of which is a junior

objective synonym of the name *Spirula* Lamarck, 1799, be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* :— (a) *Spirularius* Duméril, 1806 ; (b) *Lituina* Link, 1807 ; (c) *Spirulaea* Oken, 1815. As regards the last of the names mentioned by Mr. Bairstow, namely *Spirulites* Parkinson, 1811, the position is that, although established to represent a concept regarded by Parkinson as identical with that represented by *Spirula* Lamarck, the nominal genus *Spirulites* Parkinson, 1811, was expressly established for the reception of Fossil species of Lamarck's genus *Spirula*, and there is no clear evidence that its type species is the same nominal species as that which is the type species of *Spirula* Lamarck, 1799. I therefore consider that at this time the name *Spirulites* Parkinson, 1811, should not be placed on the *Official Index* and I accordingly direct that it be not added thereto.

10. On 29th March 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)35, subject to the amplification specified in the Minute by the Secretary dated 29th March 1954 reproduced in paragraph 9 of the present *Opinion*.

11. The following are the original references for the names placed on the *Official Lists* and *Official Indexes* in the Ruling given in the present *Opinion* :—

- fragilis*, *Spirula*, Lamarck, 1801, *Syst. Anim. sans Vertèbr.* : 102
Lituina Link, *Beschr. Natur.-Samml. Univ. Rostock* (2) : 84
Spirula Lamarck, 1799, *Mém. Soc. Hist. nat. Paris* 1799 : 80
spirula, *Nautilus*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 710
Spirulaea Oken, 1815, *Allgem. Naturgesch.* 5(1) : 531
Spirulaea Agassiz (J.L.R.), 1845, *Nomencl. zool.* (Moll.) : 84
Spiruleus Duméril, 1806, *Zool. analyt.* : 157
Spirulea Péron & Lesueur, 1807, *Voy. Aust.*, Atlas 1 : pl. xxx

12. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however,

now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

13. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

14. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

15. The present *Opinion* shall be known as *Opinion* Three Hundred and Fifteen (315) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Ninth day of March, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

OPINIONS AND DECLARATIONS
RENDERED BY THE INTER-
NATIONAL COMMISSION ON
ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 5. Pp. 91—106

OPINION 316

Rejection for nomenclatorial purposes of the *Tavola alfabetica delle Conchiglie Adriatiche* and *Prospetto della Classe dei Vermi* of S. A. Renier commonly attributed to the year 1804



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 316

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

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Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

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Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 316

REJECTION FOR NOMENCLATORIAL PURPOSES OF THE "TAVOLA ALFABETICA DELLE CONCHIGLEI ADRIATICHE" AND "PROSPETTO DELLA CLASSE DEI VERMI" OF S. A. RENIER COMMONLY ATTRIBUTED TO THE YEAR 1804

RULING :—(1) It is hereby ruled that neither (a) the *Tavola alfabetica delle Conchiglie Adriatiche* of Renier (S.A.) nor (b) that author's *Prospetto della Classe dei Verm*, each of which is commonly attributed to the year 1804, was duly published within the meaning of Article 25 of the *Règles* and therefore that no name acquired the status of availability by reason of appearing in either of the foregoing works.

(2) The two works rejected for nomenclatorial purposes under (1) above are hereby placed on the *Official Index of Rejected and Invalid Works in Zoological Nomenclature* as Works Nos. 24 and 25 respectively.

(3) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* as Name No. 761: *Nerinella* Sharpe, 1850 (gender: feminine) (type species, by selection by Cossmann (1896): *Nerinea dupiniana* d'Orbigny, 1843).

(4) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name Nos. 170 and 171 :—(a) *Nerinella* Nardo, 1847 (a name published without an "indication"); (b) *Nerinoides* Wenz, 1940 (a junior objective synonym of *Nerinella* Sharpe, 1850).

(5) The under-mentioned name is hereby placed on the *Official List of Specific Names in Zoology* as Name No. 194 :—*dupiniana* d'Orbigny, 1843, as published in the combination *Nerinea dupiniana* (specific name of type species of *Nerinella* Sharpe, 1850).

(6) The under-mentioned specific names or reputed specific names are hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Names Nos. 88 and 89 respectively :—(a) *chermesina* Renier (erroneously alleged to have appeared in 1804 in the combination *Amphinome chermesina* in a work rejected, under (1) above, for nomenclatorial purposes) (a cheironym); (b) *coccinea* Renier (included in the combination *Amphinome coccinea* in a work reputed to have been prepared in 1804 rejected, under (1) above, for nomenclatorial purposes).

I.—THE STATEMENT OF THE CASE

On 8th November 1949 Dr. L. R. Cox (*British Museum (Natural History), London*) submitted the following application for a ruling that the works by Renier (S.A.) entitled respectively the *Tavola alfabetica delle Conchiglie Adriatiche* (i.e., the work referred to by Dr. Cox as the “*Prodromo*”)¹ and the *Prospetto della Classe dei Vermi* reputed to have been prepared in the year 1804

¹ See paragraph 15 below.

had not been duly published for the purposes of Article 25 of the *Règles* :—

Application for a Ruling that the “ Prodromo ” of S. A. Renier and the “ Prospetto della Classe dei Vermi ” (dated 1804) prepared for inclusion in the “ Prodromo ” were not published within the meaning of Article 25 of the “ Règles ”

By L. R. COX, Sc.D., F.R.S.

(Department of Geology, British Museum (Natural History), London)

1. The object of the present application is to secure from the International Commission on Zoological Nomenclature a ruling that the *Prodromo* of S. A. Renier and the *Prospetto della Classe dei Vermi* (dated 1804) prepared by that author for inclusion in the *Prodromo* were never published within the meaning of Article 25 (as clarified by the International Congress of Zoology in 1948—see 1950, *Bull. zool. Nomencl.* 4 : 215—221).

2. The immediate cause of this application is the proposition by Wenz (W.) (1940, *Handb. Paläozool.*, Gastropoda : 824) of the new generic name *Nerinoides* to replace the name *Nerinella* Sharpe, 1850 (*Quart. J. geol. Soc. Lond.* 6 : 103), on the ground that that name is an invalid junior homonym of *Nerinella* Nardo, 1847 (*Prospetto Faun. marin. volg. Veneto Estuario* : 13), a name assumed by Wenz to possess rights under the Law of Priority.

3. Nardo (1847) gave no diagnosis for his *Nerinella*, to which he referred a single species only, namely *Amphinome chermesina* Renier, which he described as “ un piccolo annelide ”. If in fact Renier had ever published the foregoing specific name with an indication, definition or description, the generic name *Nerinella* Nardo, 1847, would have been an available name, for the genus so named would have been monotypical and the name would therefore have satisfied the requirements of Proviso (a) to Article 25—up to 1948, as defined by *Opinion* 1 and since that date, under the clarification of the foregoing Proviso adopted by the International Congress of Zoology (see 1950, *Bull. zool. Nomencl.* 4 : 78—80).

4. The name “ *Amphinome chermesina* Renier ” rests, however, solely upon its having been included in the work cited by Nardo as the “ *Prodromo*, 1804 ” of Renier, no reference of a more detailed kind being given by Nardo. Renier’s *Prodromo* appears to have been a work contemplated but never published. All that can be traced of it consists of printed copies, in single folio sheets, of two of its proposed

Sections. These Sections are entitled respectively *Tavola Alfabetica delle Conchiglie Adriatiche* and *Prospetto della Classe dei Vermi*. Both are believed to have been printed in 1804. The copies traced are preserved in the Library of the University of Padua and appear to be the only original ones in existence. It is uncertain whether they are page-proofs or copies printed for circulation among students. Reduced photographic reproductions of these sheets, kindly furnished by the University Authorities for use by C. D. Sherborn, when preparing his *Index Animalium*, are in the British Museum (Natural History). The term "Amfinome chermesina" appears as a vernacular name (being rendered into Latin as *Amphinome coccinea*) on page xviii of the second of the Sections described above.

5. It is submitted that the existence of these unique fragments of a work contemplated but never published cannot be held to establish that even these fragments were ever "published" within the meaning of that expression as used in Article 25, as clarified by the Paris Congress. The difficulties which have arisen in the present case through the lack of an authoritative ruling on this subject—and the risk that similar difficulties may arise in connection with other names—can only be removed when an *Opinion* on this subject is rendered by the International Commission.

6. If, as I conclude from the evidence summarised above, there existed in 1847 no specific name *Amphinome chermesina* that had been validly published with an indication, definition or description, the name *Nerinella* Nardo, 1847, is invalid, since that name depends for availability entirely upon the indication (if any) provided by the citation of the foregoing specific name. It must be concluded therefore that, contrary to the view advanced by Wenz (1940), the name *Nerinella* Sharpe, 1850, is an available name, so far as the Law of Homonymy is concerned. It is also an available name from the point of view of the Law of Priority, it being the oldest available generic name for *Nerinea dupiniana* d'Orbigny, 1843 (*Paléontolog. franç.*, Crét. 2 (Gastropod.): 81), the type species of *Nerinella* Sharpe, by selection by Cossmann, 1896 (*Ess. Paéontolog. comp.* 2 : 36). The trivial name *dupiniana* d'Orbigny, 1843, is the oldest available name for the type species of this genus.

7. The International Commission on Zoological Nomenclature is accordingly asked :—

- (1) to declare, for the purpose of the removal of doubts, that neither the *Prodrómo* of Renier (S.A.) nor the *Prospetto della Classe dei Vermi* intended for inclusion therein was published within the meaning of Article 25 of the *Règles* and therefore that no

name acquired any status in zoological nomenclature by reason of having appeared in either of the foregoing works ;

- (2) to place the generic name *Nerinella* Sharpe, 1850 (gender of name : feminine) (type species, by selection by Cossmann, 1896 : *Nerinea dupiniana* d'Orbigny, 1843) on the *Official List of Generic Names in Zoology* ;
- (3) to place the generic name *Nerinella* Nardo, 1847 (an invalid name because not published within the meaning of the *Règles*) on the *Official Index of Rejected and Invalid Generic Names in Zoology* ;
- (4) to place the trivial name *dupiniana* d'Orbigny, 1843, as published in the binominal combination *Nerinea dupiniana*, on the *Official List of Specific Trivial Names in Zoology* ;
- (5) to place the following reputed or invalid trivial names on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology* :
 - (a) the trivial name *chermesina* Renier (erroneously alleged to have appeared in 1804 in the combination *Amphinome chermesina* in a work by Renier (S.A.), which itself was not duly published as required by the *Règles*) (a cheironym) ;
 - (b) the trivial name *coccinea* Renier (included in the combination *Amphinome coccinea* in a work dated 1804 which was not duly published as required by the *Règles*).

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : Upon the receipt of Dr. Cox's application, the problem of whether the so-called *Prodromo* of Renier as a whole or either of the component sections commonly known respectively as the *Tavola alfabetica* and the *Prospetto* satisfied the requirements in regard to "publication" prescribed in Article 25 of the *Règles* was allotted the Registered Number Z.N.(S.)432.

3. Support received from Mr. R. Winckworth (London) prior to the publication of the present application : On 10th November 1949 Mr. R. Winckworth (*London*) wrote the following letter in support of the present application :—

I want to thank you for your letter of 2nd November about Cox's application that the International Commission should give a ruling that S. A. Renier's *Prodromo*² and the *Prospetto della Classe dei Vermi* was not published within the meaning of Article 25 of the *Règles*, and to say that I entirely concur with the proposals submitted.

4. Publication of the present application : The present application and Mr. Winckworth's letter of support were sent to the printer in March 1951 and were published on 15th August 1951 in Double-Part 9/10 and on 28th September 1951 in Part 11 respectively of Volume 2 of the *Bulletin of Zoological Nomenclature* (Cox, 1951, *Bull. zool. Nomencl.* 2 : 299—300 ; Winckworth, 1951, *ibid.* 2 : 312).

5. Support received after publication : The publication of Dr. Cox's application in the *Bulletin of Zoological Nomenclature* elicited support from the following specialists :—(a) The Joint Committee on Zoological Nomenclature for Paleontology in America ; (b) Dr. Myra Keen (*Stanford University, Department of Geology, Stanford, California, U.S.A.*).

6. Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America : On 9th April 1952 there was received a number of letters relating to cases already published in the *Bulletin* from Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America. Included among these was the following letter, dated 18th February 1952, reporting the support of the present application by the Joint Committee :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you

See paragraph 15 below.

that, being polled, they voted: To support the petition (eleven):— (1) Katherine V. W. Palmer; (2) Don L. Frizzell; (3) Bobb Schaeffer; (4) Siemon W. Muller; (5) Bryan Patterson; (6) A. Myra Keen; (7) J. Marvin Weller; (8) John B. Reeside, Jr.; (9) John W. Wells; (10) R. C. Moore; (11) G. Winston Sinclair. To oppose the petition, none.

7. Support received from Dr. Myra Keen (Stanford University, Department of Geology, Stanford, California, U.S.A.): On 9th June 1952 Dr. Myra Keen (*Stanford University, Department of Geology, Stanford, California, U.S.A.*) addressed to the Commission the following letter in support of the present application (Keen, 1952, *Bull. zool. Nomencl.* 6 : 312):—

I strongly support the proposal by Dr. L. R. Cox, that the works credited to Renier, 1804, be rejected. One wonders why any of these tabular summaries should have been considered published.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

8. Issue of Voting Paper V.P.(52)36: On 9th May 1952, a Voting Paper (V.P.(52)36) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the nomenclatorial status of Renier's *Prodromo*³ and *Prospetto*, as set out in Points (1) to (5) in paragraph 7 on page 300 of volume 2 of the *Bulletin of Zoological Nomenclature*" [*i.e.*, in paragraph 7 of the application reproduced in the first paragraph of the current *Opinion*].

³ See paragraph 15 below.

9. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 9th August 1952.

10. Particulars of the Voting on Voting Paper V.P.(52)36 : The state of the voting on Voting Paper V.P.(52)36 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Riley ; Dymond ; Calman ; Hankó ; Bonnet ; Vokes ; do Amaral ; Bradley ; Pearson ; Hemming ; Esaki ; Lemche ; Stoll ; Cabrera ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned, two (2) :*

Jaczewski ; Mertens.

11. Declaration of Result of Vote : On 10th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)36, signed a Certificate that the Votes cast were as set out in paragraph 10 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

12. At its meeting held at Copenhagen in August 1953, the Fourteenth International Congress of Zoology decided to insert a provision in the *Règles* establishing an "Official List" to be styled the *Official List of Works Approved as Available for Zoological Nomenclature* and of a corresponding *Official Index*

of *Rejected and Invalid Works of Zoological Nomenclature* (1953, *Copenhagen Decisions zool. Nomencl.* : 23—24). At the same time the Congress directed the insertion in the foregoing *List* of the title of any work which the International Commission might either validate under its Plenary Powers or declare to be an available work, and the insertion in the foregoing *Index* of the title of any work which the Commission might either reject under the foregoing powers or declare to be unavailable for nomenclatorial purposes. Since the foregoing decisions apply to past, as well as to future, decisions by the International Commission in cases of this kind, the opportunity presented by the preparation of the present *Opinion* has been taken to record the insertion in the foregoing *Official Index* of the titles of the works by Renier rejected for nomenclatorial purposes by the Ruling given in the present *Opinion*.

13. At the same time the occasion has been taken to rectify another minor omission. This is concerned with the name *Nerinoides* Wenz, 1940, which, as shown in Dr. Cox's application, is a junior objective synonym of the name *Nerinella* Sharpe, 1850, which has been accepted in the present *Opinion* as being an available name. In accordance with the rule that the Commission should deal with all aspects of any problem submitted to it and should place on the appropriate *Official Index* any name which it rules to be objectively invalid or otherwise unavailable, the name *Nerinoides* Wenz, 1940, has been placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* in the Ruling given in the present *Opinion*.

14. When Mr. Hemming, as Secretary, was engaged in the preparation of the customary list of original references for names placed on *Official Lists* and *Official Indexes* in the Ruling given in the present *Opinion*, he noted that Sherborn (1925, *Index Anim.*, Pars secund. (6) : 1376) attributed the name *Amphinome coccinea* not to the *Prospetto* (the work cited in Dr. Cox's application) but to the *Tavole*, a title normally used to denote another of the fragments of the work projected by Renier. It was clearly important definitely to establish whether the foregoing name had been published in the *Prospetto* for, if it had not, it could not appropriately be dealt in the present *Opinion* and would

need to be reserved for consideration in connection with an application received from Dr. Myra Keen (*Stanford University, Department of Geology, Stanford, California, U.S.A.*) for a Ruling that the *Tavole*, as well as the *Tavola alfabetica* and the *Prospetto* of Renier, was not available for nomenclatorial purposes⁴. Knowing that Dr. Sherborn had obtained a photostat copy of the *Tavola alfabetica* and *Prospetto* from the University of Padua, Mr. Hemming asked Dr. Cox to investigate this matter further. The following is the reply (dated 5th April 1954) received from Dr. Cox :—

Renier's "Prodromo" ; "Opinion" 316

Thank you for your letter of the 3rd inst., which has led me to look up Renier's works again. According to the Bibliography in Sherborn's *Index Animalium*, Renier proposed to publish a work the title of which Sherborn unfortunately abbreviates to "Prodr. osserv. Venezia", but he actually produced only three sections, the first two respectively headed *Tavola alfabetica delle conchiglie Adriatiche* (pages numbered v—xii) and *Prospetto della Classe dei Vermi* (pages numbered xv—xxvi) and the last entitled (again according to Sherborn) *Tavole per serv. conosc. classif. Anim.* We have a photographic copy of everything lent to Sherborn, and there is no title page for the work as a whole and no heading or title page for the third item mentioned above. The titles given by Sherborn were from second-hand evidence, as were also the dates (1804 for the first two items and 1807 for the third), for there is no printed date anywhere. When I went into the matter I was led to doubt if the *Tavole per serv. conosc. classif. Anim.* were really intended to form part of the same work as the first two items, owing to the considerably larger size of the *Tavole*, and concluded that these two items were all that was ever printed of the projected *Prodromo*. When therefore, I drafted my application to the International Commission I wanted a ruling that neither the *Prodromo* as a whole nor either of its extant sections considered separately was ever published, but for some reason or other I mentioned one of these sections (the *Prospetto*), but not the other (the *Tavola alfabetica conch. Adriatiche*). Page xviii of the *Prodromo* is in section 2 (the *Prospetto*), so that Sherborn's reference is definitely wrong.

15. Date to be attributed to Renier's works and title of the first of those works : On the receipt of Dr. Cox's letter of 5th April

⁴ Dr. Myra Keen's application, which bears the Registered Number Z.N.(S.) 688, was received at a considerably later date than the application dealt with in the present *Opinion*. It was published on 22nd October 1954 (*Bull. zool. Nomencl.* 9 : 257—262).

1954, Mr. Hemming, as Secretary, placed the following Minute regarding the dates to be attributed to the Renier fragments and on the title of the first of those fragments on the Commission's File Z.N.(S.)432 concerning the present case :—

On the date of the works by Renier (S.A.) dealt with in Dr. L. R. Cox's application and on the title of the first of those works

Minute by FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

Dr. Cox's letter of 5th April 1954 clearly shows that the surviving fragments of Renier's projected work do not bear any dates and therefore that the dates commonly assigned to those fragments are attributed dates based upon conclusions drawn from sources other than the fragments themselves. Accordingly, under the provisions adopted by the Thirteenth International Congress of Zoology, Paris, 1948, the dates assigned to these fragments need to be cited in square brackets (1950, *Bull. zool. Nomencl.* 4 : 225—226).

2. Dr. Cox's letter also brings to notice a further matter which requires to be considered in connection with the preparation of the *Opinion* embodying the Commission's decision on his application. This is concerned with the title to be assigned to the first of the fragments of Renier's work, namely that referred to as the "Prodomo" by Dr. Cox in his application. It is clear from Dr. Cox's letter—and the information so furnished is supplemented by the fuller particulars given in the *British Museum Catalogue* (1913, *Cat. Books Manusc. Maps Drawings Brit. Mus. (Nat. Hist.)* (4) : 1680)—(a) that none of the Renier fragments bears the title "Prodomo", (b) that this title must have been derived from some outside source, (c) that the first of the two fragments commonly attributed to the year "1804", namely that referred to in Dr. Cox's application under the term "Prodomo", in fact, bears only the title *Tavola alfabetica delle Conchiglie Adriatiche*. In these circumstances it will be necessary to amend the title of this fragment from "Prodomo" to the foregoing form in the *Opinion* dealing with this case.

16. On 6th April 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a

Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)36, as supplemented by the action prescribed by the Fourteenth International Congress of Zoology, Copenhagen, 1953, as specified in paragraph 12 above and as adjusted in paragraphs 13 to 15 above.

17. The following are the original references for names placed on *Official Lists* and *Official Indexes* in the Ruling given in the present *Opinion* :—

chermesina, *Amphinome*, Renier, [1804], *Prospetto* : xviii (a cheironym consisting of a vernacular and not a scientific term, used, moreover, in a work rejected for nomenclatorial purposes under Ruling (1) in the present *Opinion*)

coccinea, *Amphinome*, Renier, [1804], *Prospetto* : xviii (a name included in a work rejected for nomenclatorial purposes under Ruling (1) in the present *Opinion*)

dupiniana, *Nerinea*, d'Orbigny, 1843, *Paléontolog. franç.*, Crét. 2 (Gastropod.) : 81

Nerinella Nardo, 1847, *Prospetto Faun. marin. volg. Veneto Estuario* : 13 (a *nomen nudum*, being based upon the cheironym *Amphinome chermesina* Renier, [1804])

Nerinella Sharpe, 1850, *Quart. J. geol. Soc. Lond.* 6 : 103

Nerinoides Wenz, 1940, *Handb. Paläozool.*, Gastropoda : 824

18. The reference for the selection of a type species for *Nerinella* Sharpe, 1850, referred to in the Ruling given in the present *Opinion* is :—Cossmann, 1896, *Ess. Paléontolog. comp.* 2 : 36.

19. The nominal genus *Nerinella* Sharpe, 1850, is not the type genus of a family-group taxon and accordingly no question arises in the present case of placing any name on the *Official List of Family-Group Names in Zoology*.

20. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for

recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

21. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

22. The present *Opinion* shall be known as *Opinion* Three Hundred and Sixteen (316) of the International Commission on Zoological Nomenclature.

DONE in London, this Seventh day of April, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

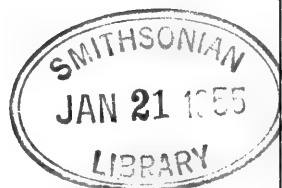
FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 6. Pp. 107—118

OPINION 317

Addition of the name *Cercopis* Fabricius, 1775 (Class
Insecta, Order Hemiptera) to the *Official List of Generic
Names in Zoology*



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 317

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 317

ADDITION OF THE NAME "CERCOPIS" FABRICIUS, 1775 (CLASS INSECTA, ORDER HEMIPTERA) TO THE "OFFICIAL LIST OF GENERIC NAMES IN ZOOLOGY"

RULING :—(1) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* as Name No. 762 :—*Cercopis* Fabricius, 1775 (gender : feminine) (type species, by selection by Latreille (1810) : *Cicada sanguinolenta* Scopoli, 1763).

(2) The under-mentioned specific name is hereby placed on the *Official List of Specific Names in Zoology* as Name No. 195 :—*sanguinolenta* Scopoli, 1763, as published in the combination *Cicada sanguinolenta* (specific name of type species of *Cercopis* Fabricius, 1775).

I.—THE STATEMENT OF THE CASE

Following upon correspondence between Professor Z. P. Metcalf (*North Carolina State College of Agriculture and Engineering of the University of North Carolina, Raleigh, North Carolina, U.S.A*), Mr. Francis Hemming (*Secretary to the Commission*) and Dr. W. E. China (*British Museum (Natural History), London*), Herr W. Wagner (*Hamburg, Germany*) on 30th January 1950 submitted to the Commission the following application for the addition of the generic name *Cercopis*

Fabricius, 1775 (Class Insecta, Order Hemiptera) to the *Official List of Generic Names in Zoology* :—

Proposed addition of “*Cercopis*” Fabricius, 1775, and “*sanguinolenta*” Scopoli, 1763, as published in the binominal combination “*Cicada sanguinolenta*”, to the Official Lists of Generic Names and Specific Trivial Names in Zoology respectively

By WILHELM WAGNER (*Hamburg-Fuhlsbüttel*)

1. The genus *Cercopis* (belonging to the Homoptera Auchenorrhyncha) was established by Fabricius, 1775 (*Syst. Ent.* : 688). The name was published in accordance with the *Règles*. It was accompanied by a diagnosis, but Fabricius did not designate a type species. However, since the name was published before 1st January 1931, it is not invalidated by this omission. The name *Cercopis* Fabricius, 1775, is not a homonym of any previously published generic name.

2. Fabricius included nine species in this genus, which alone, according to Rule (g) in Article 30, are eligible for selection as the type species of the genus. Four different species have been cited as type species of this genus in the literature, and even in the most recent literature there appears to be confusion as to the validity of these type selections. A list of references is given in the Appendix to this paper to selections or reputed selections of a type species for the genus *Cercopis* Fabricius, which has been kindly furnished by Professor Z. P. Metcalf (*in litt.*).

3. The first type selection which was strictly in accordance with the *Règles* was that by Latreille in 1810 (*Consid. gén. Crust. Arach. Ins.* : 434). *Opinions* 11 and 136 declared that type selections made in this work in the case of all genera, for which one species only was cited, were to be accepted as valid. The only species cited in the case of the genus *Cercopis* was “*sanguinolenta* Fab”, i.e., *Cercopis sanguinolenta* Fabricius, 1775 (*Syst. Ent.* : 688) ; this, as the reference given given by Fabricius shows, was not a new name published by Fabricius, but was the same as *Cicada sanguinolenta* Scopoli, 1763 (*Faun. carn.* : 112).

4. Since the validity of this type selection is beyond question, it is not necessary here to examine further the more recent references. It should be noted that in the two earlier references cited in the Appendix (namely, Latreille, 1802, and Froriep, 1806) the species *C. spumaria* Fabricius was cited but only as an example of the genus, not specifically as its type species. Consequently, this species cannot be regarded as the type species by subsequent selection in accordance with Rule (g) in Article 30. The type species must therefore be accepted as being *Cicada sanguinolenta* Scopoli, 1763.

5. Since, however, a number of different type species have been accepted for the genus *Cercopis* in the literature, various nomenclatorial difficulties have arisen.

6. *Cercopis spumaria* Linnaeus and *Cercopis sanguinolenta* Scopoli are now regarded as belonging to different genera. Hence the nomenclature of both the genera concerned is insecure. In the case of the first (based on *C. spumaria*) it fluctuates between *Cercopis* Fabricius and *Aphrophora* Germar, 1821, and in the case of the second (based on *C. sanguinolenta*) it fluctuates between *Cercopis* Fabricius and *Triecphora* Amyot et Serville, 1843. Both genera include relatively large and prominent species, which for the most part are very widespread in the palaeartic region, and the names of which in consequence, occur frequently in textbooks and in popular literature. The first genus is represented by more than 40 species in the palaeartic region, and the second by more than 10. Stabilisation is therefore highly necessary, in view of the frequent use of these names.

7. The name *Cercopis* has formed the base of the family name CERCOPIDAE and the sub-family name CERCOPINAE. But *Cercopis spumaria* and *Cercopis sanguinolenta* belong to two different sub-families. Thus, so long as there is no certainty as to which is the type species of *Cercopis*, the application of the name of the sub-family must also remain uncertain. The two above-mentioned sub-families have been treated in the most recent literature as separate families. As a result, the uncertainty extends also to the use of the family name CERCOPIDAE. This is another reason why the stabilisation of the use of the name *Cercopis* is urgently necessary.

8. In view of the importance of the generic name *Cercopis* Fabricius, 1775, which forms the basis for the family name CERCOPIDAE, I regard it as of great importance that the application of this name should be stabilised in accordance with the requirements of the *Règles Internationales de la Nomenclature Zoologique*. I, therefore, request the International Commission on Zoological Nomenclature :—

- (1) to place on the *Official List of Generic Names in Zoology* the generic name *Cercopis* Fabricius, 1775 (*Syst. Ent.* : 688) type species, by subsequent selection by Latreille, 1810 (*Consid. gén. Crust. Arach. Ins.* : 434) : *Cicada sanguinolenta* Scopoli, 1763 (*Ent. carn.* : 112) (gender of generic name : feminine).
- (2) to place on the *Official List of Specific Trivial Names in Zoology* the trivial name *sanguinolenta* Scopoli, 1763, as published in the binominal combination *Cicada sanguinolenta*.

Appendix

Particulars of type selections and alleged type selections made for the genus Cercopis Fabricius, 1775

(Based upon material furnished by Professor Z. P. Metcalf.)

<i>Date of publication containing a selection or alleged selection of a type species for Cercopis Fabricius, 1775.</i>	<i>Author who selected or who is alleged to have selected a type species for Cercopis Fabricius, 1775.</i>	<i>Species selected or alleged to have been selected by the author, and in the work specified in Col. (2).</i>
(1)	(2)	(3)
1802	<i>LATREILLE</i> <i>Histoire naturelle générale et particulière des Crustacés et des Insectes</i> 3 : 260.	<i>C. spumaria</i> Fabricius.
1806	<i>FRORIEP</i> , L. F. C. Duméril's. Doctors und Professors an der Medicinischen Schule zu Paris, Analytische Zoologie. Weimar, Landes Industrie-Comptoir : 267.	<i>C. spumaria</i> Fabricius.
1810	<i>LATREILLE</i> <i>Considérations générales sur l'ordre naturel des animaux . . .</i> Paris, Schoell : 434.	<i>C. sanguinolenta</i> Fabricius.
1833	<i>CURTIS</i> <i>British Entomology</i> 10 : 461.	<i>C. sanguinolenta</i> Linnaeus.
1840	<i>WESTWOOD</i> <i>Synopsis of the genera of British insects</i> 2 : 116.	<i>C. vulnerata</i> Rossi.
1844	<i>BLANCHARD</i> <i>Dictionnaire universel d'histoire naturelle . . .</i> 3 : 296.	<i>C. sanguinolenta</i> Fabricius.
1862	<i>CURTIS</i> <i>British Entomology</i> : 461.	<i>C. sanguinolenta</i> Linnaeus.
1869	<i>STÅL</i> <i>Hemiptera Fabriciana</i> : 11.	<i>C. carnifex</i> Fabricius.
1900	<i>KIRKALDY</i> "On the nomenclature of the Rhynchota, Heteroptera and Auchenorrhynchous Homoptera". <i>Entomologist</i> 33 : 27.	<i>C. spumaria</i> Linnaeus.

Date of publication containing a selection or alleged selection of a type species for <i>Cercopis Fabricius</i> , 1775.	Author who selected or who is alleged to have selected a type species for <i>Cercopis Fabricius</i> , 1775.	Species selected or alleged to have been selected by the author, and in the work specified in Col. (2).
(1)	(2)	(3)
1900	KIRKALDY "On the nomenclature of the genera of the Rhynchota". <i>Entomologist</i> 33 : 263.	<i>C. spumaria</i> Linnaeus.
1906	KIRKALDY "Leafhoppers and their natural enemies". <i>Bull. Hawaiian Sugar Pl. Assoc. Div. Ent.</i> 1 : 379, 380.	<i>C. spumaria</i> Linnaeus.
1906	KIRKALDY "Leafhoppers and their natural enemies". <i>Bull. Hawaiian Sugar Pl. Assoc. Div. Ent.</i> 1 : 379.	<i>C. carnifex</i> Fabricius.
1910	SCHMIDT "Neue Gattungen und Arten der Subfamilie Cercopinae . . ." <i>Arch. Nat.</i> 76 : 103.	<i>C. carnifex</i> Fabricius.
1912	LALLEMAND "Cercopidae". <i>Gen. Ins.</i> 143 : 58.	<i>C. spumaria</i> Fabricius.
1912	VAN DUZEE "Hemipterological gleanings". <i>Bull. Buffalo Soc. Nat. Sci.</i> 10 : 507.	<i>C. carnifex</i> Fabricius.
1921	JACOBI "Kritische Bemerkungen über die Cercopidae". <i>Arch. Nat.</i> 87 : 5, 7.	<i>C. spumaria</i> Linnaeus.
1921	JACOBI <i>Ibid.</i> : 47.	<i>C. carnifex</i> Fabricius.
1929	HAUPT "Neueinteilung der Homoptera Cicadina . . ." <i>Zool. Jahrb. Syst. Oek.</i> 58 : 222.	<i>C. sanguinolenta</i> Linnaeus.
1933	NAST "Beitrage zur Morphologie und geographischen Verbreitung der mitteleuropäischen und mediterranen Arten aus der Sub-familie Cercopinae". <i>Ann. Mus. Zool. Polonici</i> 10 : 7—13.	<i>C. sanguinolenta</i> Scopoli.
1934	METCALF and HORTON "The Cercopoidea of China". <i>Lingnam Sci J.</i> 13 : 417.	<i>C. spumaria</i> Linnaeus.
1935	HAUPT Die Tierwelt Mitteleuropas 4 : 154.	<i>C. sanguinolenta</i> Scopoli.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Herr Wagner's application, the question of the addition of the name *Cercopis Fabricius*, 1775, to the *Official List of Generic Names in Zoology* was allotted the Registered Number Z.N.(S.)441.

3. Publication of the present application : The present application was sent to the printer in December 1950 and was published on 15th August 1951 in Double-Part 9/10 of volume 2 of the *Bulletin of Zoological Nomenclature* (Wagner, 1951, *Bull. zool. Nomencl.* 2 : 301—304).

4. No objections received : The publication of the present application in the *Bulletin of Zoological Nomenclature* elicited no objection to the action proposed.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

5. Issue of Voting Paper V.P.(52)37 : On 9th May 1952, a Voting Paper (V.P.(52)37) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the name *Cercopis Fabricius*, 1775, as specified in Points (1) and (2) on page 302 of volume 2 of the *Bulletin of Zoological Nomenclature*" [*i.e.*, in the Points so numbered in paragraph 8 of the application reproduced in the first paragraph of the present *Opinion*].

6. The Prescribed Voting Period. As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 9th August 1952.

7. Particulars of the Voting on Voting Paper V.P.(52)37 : The state of the voting on Voting Paper V.P.(52)37 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Riley ; Dymond ; Calman ; Hankó ; Bonnet ; Vokes ; do Amaral ; Pearson ; Hemming ; Bradley ; Esaki ; Lemche ; Stoll ; Cabrera ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned, two (2) :*

Jaczewski ; Mertens.

8. Declaration of Result of Vote : On 11th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)37, signed a Certificate that the Votes cast were as set out in paragraph 7 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

9. On 7th April 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)37.

10. The following are the original references for the names placed on *Official Lists* in the Ruling given in the present *Opinion* :—

Cercopis Fabricius, 1775, *Syst. Ent.* : 688
sanguinolenta, *Cicada*, Scopoli, 1763, *Ent. carn.* : 112

11. The following is the reference for the selection of a type species for *Cercopis* Fabricius, 1775, referred to in the Ruling given in the present *Opinion* :—Latreille, 1810, *Consid. gén. Anim. Crust. Arach. Ins.* : 434, 264.

12. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.)75 has been allotted.

13. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

14. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

15. The present *Opinion* shall be known as *Opinion Three Hundred and Seventeen (317)* of the International Commission on Zoological Nomenclature.

DONE in London, this Seventh day of April, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.,

Secretary to the Commission

VOLUME 9. Part 8. Pp. 119—130

OPINION 318

Addition to the *Official Indexes of Rejected and Invalid Names in Zoology* of the names for three nominal genera and for fourteen nominal species of the Class Pelecypoda included in a paper by La Rocque (A.) distributed in microfilm in 1948



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 318

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 318

ADDITION TO THE " OFFICIAL INDEXES OF REJECTED AND INVALID NAMES IN ZOOLOGY " OF THE NAMES FOR THREE NOMINAL GENERA AND FOR FOURTEEN NOMINAL SPECIES OF THE CLASS PELECYPODA INCLUDED IN A PAPER BY LA ROCQUE (A.) DISTRIBUTED IN MICROFILM IN 1948

RULING :—(1) (a) The new names proposed for three nominal genera and for fourteen nominal species in the Class Pelecypoda described in a paper by La Rocque (A.) entitled " Pre-Traverse Devonian Pelecypods of Michigan " possess no availability under the Law of Priority or under the Law of Homonymy as from the date in 1948 when the above paper in typescript form was distributed in microfilm under the heading " University Microfilms Publication 1059 ". (b) The names referred to in (a) above acquired the status of availability in zoological nomenclature only as from the date in 1950 when the foregoing paper by La Rocque was validly published in Section 10 of Volume 7 of the serial publication entitled *Contributions from the Museum of Paleontology, University of Michigan*.

(2) The under-mentioned generic names included in the paper specified in (1)(a) above and as there rejected for nomenclatorial purposes are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Names Nos. 172 to 174 respectively :—(a) *Diodontopteria* La Rocque, 1948 ; (b) *Liromytilus* La Rocque, 1948 ; (c) *Phenacocyclas* La Rocque, 1948.

(3) The under-mentioned specific names included in the paper specified in (1)(a) above and as there rejected for nomenclatorial purposes are hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Names Nos. 90 to 103 respectively :—(a) *calliotis* La Rocque, 1948, in the combination *Actinopterella calliotis* ; (b) *coralliophila* La Rocque, 1948, in the combination *Panenka coralliophila* ; (c) *ehlersi* La Rocque

1948, in the combination *Diodontopteria ehlersi*; (d) *furcistria* La Rocque, 1948, in the combination *Leptodesma furcistria*; (e) *kellumi* La Rocque, 1948, in the combination *Diodontopteria kellumi*; (f) *macrotis* La Rocque, 1948, in the combination *Cornellites macrotis*; (g) *michiganensis* La Rocque, 1948, in the combination *Follmannella michiganensis*; (h) *migrans* La Rocque, 1948, in the combination *Limoptera migrans*; (i) *nucella* La Rocque, 1948, in the combination *Goniophora nucella*; (j) *peninsularis* La Rocque, 1948, in the combination *Actinopterella peninsularis*; (k) *peninsularis* La Rocque, 1948, in the combination *Leiopteria peninsularis*; (l) *peninsularis* La Rocque, 1948, in the combination *Solenomorpha peninsularis*; (m) *pohli* La Rocque, 1948, in the combination *Phenacocyclas pohli*; (n) *sibleyense* La Rocque, 1948, in the combination *Conocardium sibleyense*.

I.—THE STATEMENT OF THE CASE

On 6th February 1951, Professor G. Winston Sinclair (for the Joint Committee on Zoological Nomenclature for Paleontology in America) and Dr. Richard E. Blackwelder (for the Nomenclature Committee of the Society of Systematic Zoology) addressed a joint letter to the International Commission, in which, on behalf of the bodies which they respectively represented, they (1) asked for a ruling that the distribution of a paper in the form of a microfilm does not constitute "publication" for the purposes of the *Règles*, and (2) cited, as an example of the practice against which they asked for a Ruling, the case presented by a paper by La Rocque (A.) containing the names of three new nominal genera, and of fourteen new nominal species, of the Class Pelecypoda which had been distributed in the form of a microfilm in 1948 but which had not appeared in printed form until 1950. The following is an extract from the foregoing application of the passage relating to the foregoing paper:—

.....

1. In 1948 a paper entitled "Pre-Traverse Devonian Pelecypods of Michigan", by Aurèle La Rocque, was offered for sale as "University

Microfilms Publication 1059", consisting of a microfilm copy of a typescript and accompanying plates of photographs. This offering was advertised to an extensive mailing-list of libraries and others, and the paper has been available to the public in this form since 1948.

2. In 1950 the same paper was issued in printed form as : Contributions from the Museum of Paleontology, University of Michigan, Volume 7, No. 10 (pp. 271—366, 19 plates).

3. In this paper (in both forms) are described three new genera and fourteen new species of pelecypods.

4. We ask the Commission to rule that the names of these new taxonomic units are to be ignored until their appearance in printed form in 1950.

.....

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. **Registration of the present application :** On the receipt of the joint application by Professor Sinclair and Dr. Blackwelder, the problem whether the distribution of a paper in microfilm constitutes "publication" for the purposes of the *Règles* was allotted the Registered Number Z.N.(S.) 528. For the time being, the associated problem of the status of the new names for Pelecypod genera and species in the paper by La Rocque distributed in microfilm in 1948 was allotted the same Registered Number, but later, when the question of principle had been settled by the adoption of *Declaration* 13 (as explained in paragraph 6 below), the question of the status of the individual names included in La Rocque's paper was re-registered as Z.N.(S.) 826.

3. **Publication of the present application :** The present application was sent to the printer in April 1951, and was published on 28th September 1951 in Part 11 of volume 2 of the *Bulletin of Zoological Nomenclature* (Sinclair & Blackwelder, 1951, *Bull. zool. Nomencl.* 2 : 306—308).

4. **Support for the proposal submitted :** Support for the proposal submitted in this case was received from the under-mentioned

groups of specialists and individual specialists. All the statements so received were published in the *Bulletin of Zoological Nomenclature* either in 1951 in volume 2 or in 1952 in volume 6. The references to the places where these statements were so published are given in each case in the following list. The communications in question were, in addition, summarised in the Agenda prepared for the Copenhagen Meetings of the Commission and the Colloquium (1953, *Bull. zool. Nomencl.* **10** : 270—274). For these reasons these communications are not reprinted in full in the present *Opinion*.

- (1) E. H. Behre (*Louisiana State University and Agricultural and Mechanical College, Baton Rouge, U.S.A.*) (1951, *Bull. zool. Nomencl.* **2** : 310)
- (2) The Committee on Nomenclature of the American Museum of Natural History, New York (1951, *ibid.* **2** : 308) (Note : This communication was signed by : Mont A. Cazier ; Edwin H. Colbert ; Norman D. Newall ; George H. H. Tate ; John T. Zimmerman (*Chairman*))
- (3) The " Zoological Record " Committee of the Zoological Society of London (1951, *ibid.* **2** : 311—312) (Note : This communication was approved at a meeting of the Committee attended by the following :—Sheffield A. Neave, C.M.G., O.B.E., D.Sc. (*Chairman*) ; William J. Hall, M.C., D.Sc. ; Francis Hemming, C.M.G., C.B.E. ; Sir Norman Kinnear, C.B. ; Terence Morrison-Scott, D.S.C., M.A., M.Sc. ; Malcolm Smith ; C. J. Stubblefield, D.Sc., F.R.S. ; L. Harrison-Matthews, Sc.D. (*Scientific Director and Deputy Secretary, Zoological Society of London*))
- (4) Robert Mertens (*Natur-Museum und Forschungs-Institut Senckenberg, Senckenberg-anlage, Frankfurt a. M., Germany*) (1952, *ibid.* **6** : 223).

5. Objections to the proposal submitted : The under-mentioned specialists expressed themselves as being in opposition to the proposal submitted. For reasons similar to those explained in the preceding paragraph, these communications are not reprinted in full in the present *Opinion*.

- (1) Charles H. Blake (*Massachusetts Institute of Technology, Department of Biology, Cambridge, Massachusetts, U.S.A.*) (1951, *Bull. zool. Nomencl.* **2** : 309) ;
- (2) Joshua L. Baily, Jr. (*San Diego, California, U.S.A.*) (1952, *Bull. zool. Nomencl.* **6** : 223).

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

6. Issue of Voting Paper V.P.(52)38 : On 9th May 1952, a Voting Paper (V.P.(52)38) in regard to this case was issued to the Members of the Commission. Under the revised procedure prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 136—137), questions relating to the interpretation of the *Règles*, when the subject of decisions by the International Commission, are no longer eligible for inclusion in the “*Opinions*” Series, the Commission being required to render such decisions in the “*Declarations*” Series and to submit all *Declarations* so adopted to the next International Congress for approval. Accordingly, as the application submitted in the present case raised the individual case of the status of the names in the paper by La Rocque distributed in microfilm in 1948, in addition to asking for a Ruling on the issue of principle involved in the question whether the distribution of papers in the foregoing manner constituted “publication” for the purposes of Article 25 of the *Règles*, it was decided to submit two proposals in the foregoing Voting Paper for consideration by the Commission. The first of these was concerned with the proposed adoption of a *Declaration* on the subject of the status of papers distributed in microfilm, the second with the proposed adoption of an *Opinion* on the particular problem of the status of the new names in the paper by La Rocque distributed in microfilm in 1948. The subsequent history of the portion of the Sinclair/Blackwelder proposal which was concerned with the question of the interpretation of Article 25 is given in the Commission’s *Declaration* 13 rendered simultaneously with the present *Opinion*.¹ The following is the proposal relating to the names in the paper by La Rocque distributed in microfilm in 1948 which was submitted with Voting Paper V.P.(52)38 :—

The new names proposed for three genera and fourteen species in the Class Pelecypoda described in a paper by Aurèle La Rocque entitled “Pre-Devonian Pelecypods of Michigan” possess no availability under the Law of Priority as from the date in 1948 when the above paper in typescript form was distributed in microfilm. The following three generic names so made known are hereby added to the

¹ See pp. i—xii of the present volume.

Official Index of Rejected and Invalid Names in Zoology as being names possessing no status under either the Law of Priority or under the Law of Homonymy : [Here will be inserted the three generic names in question]. Similarly the following fourteen specific trivial names so made known are hereby placed on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology* as being names possessing no status under either of the Laws specified above : [Here will be inserted the fourteen specific trivial names in question]. The above names acquired availability in zoological nomenclature only as from the date in 1950 when the foregoing paper by La Rocque was validly published as Section 10 of Volume 7 of *Contributions from the Museum of Paleontology, University of Michigan*.

7. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 9th August 1952.

8. Particulars of the Voting on the draft "Opinion" submitted in Voting Paper V.P.(52)38 : The state of the voting on the draft *Opinion* submitted in Voting Paper V.P.(52)38 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following seventeen (17) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Riley ; Dymond ; Calman ; Hankó ; Bonnet ;
Vokes ; do Amaral ; Pearson ; Hemming ; Bradley ;
Esaki ; Lemche ; Mertens ; Stoll ; Cabrera ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Paper not returned, one (1) :*

Jaczewski.

9. Declaration of Result of Vote : On 11th August, 1952, Mr. Hemming, Secretary to the International Commission, acting as

Returning Officer for the Vote taken on Voting Paper V.P.(52)38, signed a Certificate that the Votes cast were as set out in paragraph 8 above and declaring that the proposal for the adoption of the suggested *Opinion* submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

10. On 7th April 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on the draft *Opinion* submitted in Voting Paper V.P.(52)38.

11. The following are the numbers of the pages on which the under-mentioned names placed on the *Official Indexes* in the Ruling given in the present *Opinion* appeared in the typescript version of the paper by La Rocque (A.) entitled "Pre-Traverse Devonian Pelecypods of Michigan" when distributed in micro-film in 1948 under the title *University Microfilms Publication 1059* :—

- calliotis*, *Actinopterella*, La Rocque, 1948, *Univ. Microfilms Publ. 1059* : 22 (in microfilm)
- coralliophila*, *Panenka*, La Rocque, 1948, *ibid.* : 118
- Diodontopteria* La Rocque, 1948, *ibid.* : 36
- ehlersi*, *Diodontopteria*, La Rocque, 1948, *ibid.* : 39
- furcistria*, *Leptodesma*, La Rocque, 1948, *ibid.* : 33
- kellumi*, *Diodontopteria*, La Rocque, 1948, *ibid.* : 41
- Liromytilus* La Rocque, 1948, *ibid.* : 51
- macrotis*, *Cornellites*, La Rocque, 1948, *ibid.* : 12
- michiganensis*, *Follmanella*, La Rocque, 1948, *ibid.* : 17
- migrans*, *Limoptera*, La Rocque, 1948, *ibid.* : 47
- nucella*, *Goniophora*, La Rocque, 1948, *ibid.* : 61
- peninsularis*, *Actinopterella*, La Rocque, 1948, *ibid.* : 21
- peninsularis*, *Leiopteria*, La Rocque, 1948, *ibid.* : 26
- peninsularis*, *Solenomorpha*, La Rocque, 1948, *ibid.* : 121
- Phenacocyclus* La Rocque, 1948, *ibid.* : 89
- pohli*, *Phenacocyclus*, La Rocque, 1948, *ibid.* : 96
- sibleyense*, *Conocardium*, La Rocque, 1948, *ibid.* : 102

12. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and the corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

13. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

14. The present *Opinion* shall be known as *Opinion* Three Hundred and Eighteen (318) of the International Commission on Zoological Nomenclature.

DONE in London, this Eighth day of April, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

APPENDIX

Note for purposes of record regarding the circumstances in which Professor Aurèle La Rocque's paper on the Pre-Traverse Devonian Pelecypods of Michigan was distributed in microfilm prior to its being published in printed form in the normal manner

MINUTE, dated 8th October, 1954, by FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

The citation in the application for the banning of the distribution of microfilm as a method of "publishing" zoological names submitted jointly by the Joint Committee on Zoological Nomenclature for Paleontology in America and the Nomenclature Committee of the Society of Systematic Zoology of the paper by Professor Aurèle La Rocque on the Pre-Traverse Devonian Pelecypods of Michigan distributed in microfilm in 1948 served the useful purpose of demonstrating that the problem raised by the applicant bodies was concerned not with a theoretical danger but with a problem which had actually arisen and on which it was important therefore that a decision should be taken at the earliest possible date. Nevertheless, the citation in this way of a paper by a particular author that had been distributed in a manner which it was desired to ban inevitably placed the author concerned in a somewhat embarrassing position.

2. It accordingly appeared to me, as Secretary to the Commission, that it would be fair to afford an opportunity to Professor La Rocque to furnish a personal statement on this matter before the publication of the *Opinion* by the Commission placing on the *Official Indexes of Rejected and Invalid Names* the new generic and specific names included in the version of the paper referred to above as distributed in 1948 in microfilm form. The following

is an extract from the letter dated 2nd October 1954 which I received from Professor La Rocque on this subject :—

I desire to emphasise certain aspects of the matter which have not been sufficiently stressed in the past.

All parties involved acted in good faith. The Chairman of my doctoral committee directed my work with early publication in mind long before the question of microfilming was raised ; the editors of the *Contributions from the Museum of Paleontology, University of Michigan*, continued with their plans for conventional publication long after the dissertation had been microfilmed. The paper was printed in March 1950 as No. 10 of volume 7 of the *Contributions*. I should not like the suggestion, however faint or unintentional, that the dissertation was microfilmed to gain advantage over other workers. There was simply no advantage to be gained over anyone, because no one, to my knowledge, was working on this group of pelecypods at the time. For that matter, no one has worked on them since.

The Dean and Faculty of the Horace H. Rackham School of Graduate Studies of the University of Michigan established the rule requiring microfilming of all dissertations within their jurisdiction with the praiseworthy aim of making the information contained in them more easily available than it was in typescript. My work happened to be the first to come under these rules in the field of paleontology.

When my dissertation came up for approval, I was bound to observe the rules of the Graduate School and I had no means of preventing the microfilming of the dissertation, even if I had wanted to. My personal feeling is that microfilming should not be considered as publication and I think that the conventional printing of my dissertation is evidence enough of my opinion in that matter.

It would be fair, I think, to mention these facts in the discussion of this case and I shall be much obliged if you will do so.

3. In replying on 7th October 1954, I assured Professor La Rocque that there had never at any time been any suggestion that any of the persons involved in this case had acted otherwise than in good faith. At the same time I gave an undertaking to Professor La Rocque that the information contained in his letter of 2nd October 1954 would be incorporated in the *Opinion* containing the Commission's decision in the present case.

4. In accordance with the undertaking referred to in paragraph 3 above, I hereby direct that the present Minute be attached to *Opinion* 318 as an Appendix.

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 9. Pp. 131—146

OPINION 319

Designation, under the Plenary Powers, of type species for the nominal genera *Nysius* Dallas, 1852, and *Artheneis* Spinola, 1837 (Class Insecta, Order Hemiptera) in harmony with accustomed usage



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 319

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 319

DESIGNATION, UNDER THE PLENARY POWERS, OF TYPE SPECIES FOR THE NOMINAL GENERA “NYSIUS” DALLAS, 1852, AND “ARTHENEIS” SPINOLA, 1837 (CLASS INSECTA, ORDER HEMIPTERA) IN HARMONY WITH ACCUSTOMED USAGE

RULING :—(1) Under the Plenary Powers, (a) all type selections for the under-mentioned nominal genera made prior to the present Ruling are hereby set aside, and (b) the under-mentioned species are hereby designated to be their respective type species :—(i) *Lygaeus thymi* Wolff, 1804, to be the type species of *Nysius* Dallas, 1852 ; (ii) *Artheneis foveolata* Spinola, 1837, to be the type species of *Artheneis* Spinola, 1837.

(2) The under-mentioned generic names (Class Insecta, Order Hemiptera) are hereby placed on the *Official List of Generic Names in Zoology* as Names Nos. 763 to 765 respectively :—(a) *Nysius* Dallas, 1852 (gender : masculine) (type species, by designation, under the Plenary Powers, under (1)(b)(i) above : *Lygaeus thymi* Wolff, 1804) ; (b) *Artheneis* Spinola, 1837 (gender : feminine) (type species, by designation, under the Plenary Powers, under (1)(b)(ii) above : *Artheneis foveolata* Spinola, 1837) ; (c) *Rhypodes* Stål, 1868 (gender : masculine) (type species, by monotypy : *Nysius zealandicus* Dallas, 1852).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Names Nos. 196 to 198 respectively :—(a) *thymi* Wolff, 1804, as published in the combination *Lygaeus thymi*

(specific name of type species, by designation, under the Plenary Powers, under (1)(b)(i) above, of *Nysius* Dallas, 1852); (b) *foveolata* Spinola, 1837, as published in the combination *Artheneis foveolata* (specific name of type species, by designation, under the Plenary Powers, under (1)(b)(ii) above, of *Artheneis* Spinola, 1837); (c) *clavicornis* Fabricius, 1794, as published in the combination *Lygaeus clavicornis*.

(4) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Names Nos. 175 and 176 respectively:—(a) *Tyrrheneis* Kirkaldy, 1909 (a junior objective synonym of *Artheneis* Spinola, 1837, under the Ruling given, under the Plenary Powers, under (1)(b)(ii) above); (b) *Myersia* Evans, 1929 (a junior homonym of *Myersia* Viereck, 1912).

I.—THE STATEMENT OF THE CASE

On 12th January 1945 Dr. R. I. Sailer (*United States Department of Agriculture, Bureau of Entomology and Plant Quarantine, Washington, D.C., U.S.A.*) submitted an application for the use by the Commission of its Plenary Powers for the purpose of designating type species for the genera *Nysius* Dallas, 1852, and *Artheneis* Spinola, 1837 (Class Insecta, Order Hemiptera) in harmony with accustomed nomenclatorial usage. The application so submitted was a joint paper by Dr. Robert L. Usinger (at that time of the *United States Public Health Service* and now of the *University of California, Division of Entomology and Parasitology, Berkeley, California, U.S.A.*) and Dr. Sailer, which under the title “Nomenclature of the genus *Lygaeus* and its allies (Lygaeidae: Heteroptera)” and had already been published in December 1944 (Usinger & Sailer, December 1944, *Proc. ent. Soc. Wash.* 46 : 260—262). The foregoing application, as slightly expanded

as the result of correspondence between the Secretary and the applicants, was as follows :—

Proposed use of the Plenary Powers to designate type species for the genera "Nysius" Dallas, 1852, and "Artheneis" Spinola, 1837 (Class Insecta, Order Hemiptera)

By R. L. USINGER (*United States Public Health Service*) and
R. I. SAILER (*United States Department of Agriculture, Washington, D.C., U.S.A.*)

1. China (1943, *The Generic Names of British Insects*, pt. 8 : 236), has shown that, under the International Rules of Zoological Nomenclature the name *Nysius* Dallas, 1852 (*List Specimens Hem. Ins. Coll. Brit. Mus.* 2 : 551), is not applicable to the genus universally known under that name. Through an oversight China cited *Macroparius* Stål, 1872 (*Ofvers. VetenskAkad. Förhandl.*, Stockholm 29 : 43), as the correct name instead of *Artheneis* Spinola, 1837 (*Ess. Ins. Hémipt.* : 250), which he listed as a synonym. In subsequent correspondence he agreed that the latter name must be employed for this genus of LYGAEIDAE. Unfortunately, this change would produce much confusion in literature of economic entomology since the name *Nysius* has become virtually synonymous with "false chinch bug" and "Rutherglen bug", two important pests of agricultural crops in Europe, North America, and Australia. It seems advisable, therefore, to request the International Commission on Zoological Nomenclature to take appropriate action under suspension of the Rules in order to maintain *Nysius* for the genus of bugs to which it has long been applied.

2. The change to either *Macroparius* or *Artheneis* is not made necessary through any misconception of the groups involved but simply through two unfortunate type selections. Distant (1903), ignoring the carefully defined subgenera of Stål (1874, (*Enum. Hemipt.* 4 : 119—122,) and Horváth (1890, *Rev. Ent.* 9 : 185—191) considered the genus *Nysius* as a unit and selected *Nysius zealandicus* Dallas, 1852, as its type species. *N. zealandicus* has previously been set apart by Stål (in 1868 (*K. svensk. Vetensk Akad. Handl.*, Stockholm (n.f.) 7 No. 11) : 76) in a monotypic subgenus, *Rhypodes*, and *Nysius* was used for the cosmopolitan group including *Lygaeus thymi* Wolff, 1804 (*Icon. Cimicium* (4) : 149) and its allies. This did not exclude *zealandicus* from consideration as the type species of *Nysius*, since Dallas included it as one of the original species. Distant continued to use the name *Nysius* for the false chinch bug and its allies until his death. However, Evans (1929) raised most of the subgenera, including *Rhypodes*, to full genera. This should have precipitated the matter, because the name *Nysius* should have been used in place of *Rhypodes*, and the next oldest synonym should have been selected for *Nysius* auct. nec Dallas. However, Distant's type selection was overlooked, and it remained for Dr. China to point out the nomenclatural inconsistency in 1943.

3. Meanwhile, Kirkaldy (1909) noted that, as Spinola himself had suggested, *Artheneis* Spinola, 1837 (a common European genus and the type of the sub-family ARTHENEINAE), actually comprised two genera. Instead of following general usage and selecting *Artheneis foveolata* Spinola, 1837 (*Ess. Ins. Hémipt.* : 253) as the type species of *Artheneis*, Kirkaldy cited “(type *eymoides*), = *Nysius* Dallas, 1852” [sic], thus confusing the *Nysius* picture and necessitating a new name, *Tyrrheneis*, which he proposed (1909, *Canad. Ent.* 41 : 31) for *Artheneis* auct., nec Kirkaldy. It is not clear whether Kirkaldy intended to replace *Nysius* with *Artheneis* or not. He described many new species of *Nysius* in 1910 but the paper was published posthumously. We have seen no evidence in his published works or in his private collection to indicate that he contemplated a change in the name *Nysius*.

4. Oshanin (1912) ignored the earlier type fixations and selected type species designed to legalise current usage. Oshanin's type selections were accepted by Van Duzee in his “Check List” (1916) and “Catalogue” (1917) and have been generally, though incorrectly, accepted by hemipterists up to the present time.

5. Thus we are faced with a situation in which two authors selected type species which completely upset existing usage. The changes were entirely unnecessary and it seems clear that the authors had no intention of changing anything, because they failed to make the changes in their own subsequent work. Under the Rules their intentions are, of course, of no consequence, but considered in connection with the economic importance of the group and the universal acceptance of the names in current usage, it seems justifiable to consider action under suspension of the Rules which would permit retention of the name *Nysius* for the concept with which it has been universally associated.

6. We, therefore, respectfully recommend that the International Commission on Zoological Nomenclature exercise the Plenary Power conferred on it by the International Congress of Zoology and that the following actions be taken :

- (1) Reject Distant's (1903) selection of *Nysius zealandicus* Dallas, 1852, in favour of Oshanin's (1912) selection of *Lygaeus thymi* Wolff, 1804, as the type species of *Nysius* Dallas, 1852.
- (2) Reject Kirkaldy's (1909) selection of *Artheneis cymoides* Spinola, 1837, in favour of Oshanin's (1912) selection of *Artheneis foveolata* Spinola, 1837, as the type species of *Artheneis* Spinola, 1837.

- (3) Place the generic names *Nysius* Dallas, 1852, and *Artheneis* Spinola, 1837, with the respective type species specified above on the *Official List of Generic Names in Zoology*, together with the generic name *Rhyphodes* Stål, 1868 (type species by monotypy : *Nysius zealandicus* Dallas, 1852).

Conclusions

Suppression of the Distant and Kirkaldy type selections will result in the following :

Nysius Dallas, 1852, type species *Lygaeus thymi* Wolff, 1804 = *Macroparius* Stål, 1872, type species *Heterogaster graminicola* Kolenati, 1846.

Rhyphodes Stål, 1868, type species, *Nysius zealandicus* Dallas, 1852 = *Lygaeus clavicornis* Fabricius, 1794, (*Ent. syst.* 4 : 169) = *Myersia* Evans, 1929 *Bull. ent. Res.* 19 : 353, type species *Lygaeus clavicornis* Fabricius, 1794.

Artheneis Spinola, 1837, type species, *Artheneis foveolata* Spinola, 1837 = *Tyrrheneis* Kirkaldy, 1900, type species *Artheneis foveolata* Spinola, 1837.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of the application submitted by Dr. Usinger and Dr. Sailer, the problem of the type species to be accepted for the genera *Nysius* Dallas, 1852, and *Artheneis* Spinola, 1837, was allotted the Registered Number Z.N.(S.) 181.

3. Issue of Public Notices in 1947 : Owing to difficulties arising from paper rationing, shortage of labour at the printing works and similar causes great delays were experienced in the period 1945—1947 in the printing of papers for publication in the *Bulletin of Zoological Nomenclature* ; throughout that period the printers were unable to give delivery of papers already in their hands for printing. In these circumstances it was judged at that time that no useful purpose would be served by sending further instalments of papers to the printers. For this reason it had proved impossible by the end of 1947 to arrange for the present application to be published. In order, however, to make some

progress in its consideration, particulars relating to it were included in a Public Notice which on 20th November 1947 was issued to the serial publications prescribed by the Ninth International Congress of Zoology, Monaco, 1913, when it conferred Plenary Powers upon the International Commission. The publication of these Notices elicited no objection to the action proposed in this case.

4. Postponement of consideration of the present application in Paris in 1948 : It had been hoped that, as no objection had been lodged against the proposed use of the Plenary Powers in the present case, it would be possible for the International Commission to reach a decision on it during its Session in Paris in 1948, and arrangements were made for its submission to the Commission at that Session. The time available in Paris was, however, so short and so much of it was devoted to considering proposals for the amendment, clarification and amplification of the *Règles* that it proved impossible for the Commission to deal with all the applications relating to individual names that were then awaiting attention. The present was one of the applications which for this reason it was impossible to lay before the Commission at that Session.

5. Effect on the present application of certain decisions of a general character taken by the Paris Congress in 1948 : In the period immediately following the Paris Session the whole of the resources of the Commission were directed to the preparation and publication of the Official Records of the Commission and the Congress in Paris in 1948. These were published in 1950 in which year therefore it was found possible to make arrangements for the resumption of publication in the *Bulletin of Zoological Nomenclature* of applications relating to individual names submitted by specialists to the Commission for decision. Every application outstanding at that time required either (1) to be, in part, redrafted in order to take account of the directions issued to the Commission by the Paris Congress that in future it should place on the *Official Lists* all names found to be the oldest available names for the taxonomic units dealt with in its *Opinions*, and on the *Official Indexes of Rejected and Invalid Names* all names declared in those *Opinions* to be objectively invalid, or (2) when submitted to the Commission, to be accompanied by a supplementary note

indicating the action called for under the decisions referred to above. In the present case the second of these courses was adopted and the following supplementary note was prepared by the Secretary :—

On the application for the use of the Plenary Powers to designate type species for the genera "Nysius" Dallas, 1852, and "Artheneis" Spinola, 1837 (Class Insecta, Order Hemiptera) submitted by Professor Robert L. Usinger and Dr. R. I. Sailer

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

1. The application to the International Commission on Zoological Nomenclature for the use of the Plenary Powers for the purpose of varying the type species of the genera *Nysius* Dallas, 1852, and *Artheneis* Spinola, 1837, prepared jointly by Professor Robert L. Usinger (*University of California, Berkeley, California*, at that time of the *United States Public Health Service*) and Dr. R. I. Sailer (*United States National Museum, Washington, D.C.*) was received on 15th February 1945 under cover of a letter from Dr. Sailer, dated 12th January 1945. This application had already (December 1944) been published by these authors (*Proc. ent. Soc. Wash.* 46 : 260—262). Unfortunately wartime and post-war difficulties, including an unavoidable change in the Commission's printers, made it impossible to publish this application before the meeting of the International Congress of Zoology in Paris in 1948, while since then it was necessary until recently to husband the financial resources of the Commission to secure the publication of the volumes of the *Bulletin of Zoological Nomenclature* containing the Paris records.

2. Three decisions taken by the Paris Congress slightly affect the present application. Of these, the first two arise from the establishment of the *Official List of Specific Trivial Names in Zoology* and the *Official Index of Rejected and Invalid Generic Names in Zoology*. Under the first of those decisions there is to be inscribed on the *Official List of Specific Trivial Names in Zoology*, among other trivial names, the trivial name of the type species of each genus, the name of which is placed on the *Official List of Generic Names in Zoology*, except where such a trivial name is not the oldest available trivial name for the species in question. In such a case the oldest such trivial name is to be placed on the *Official List* in lieu of the trivial name of the nominal species which is the type species of the genus concerned (1950, *Bull. zool. Nomencl.* 4 : 269—271, 283—284). Under the second of these decisions, there are to be added to the *Official Index* names suppressed by the Commission or declared by the Commission to be invalid. Under the third of these decisions, it is necessary now to record the gender of every generic name placed on the *Official List*.

3. Applying these decisions to the present case, we find that, if the Commission approve the proposals set forth in Professor Usinger's and Dr. Sailer's application, the trivial names *thymi* Wolff, 1804, as published in the combination *Lygaeus thymi* (which in that event will have become the type species of *Nysius* Dallas, 1852) and *foveolata* Spinola, 1837, as published in the combination *Artheneis foveolata* (which in that event will have become the type species of *Artheneis* Spinola, 1837) will require to be placed on the *Official List of Specific Trivial Names in Zoology*. The trivial name *zealandicus* Dallas, 1852, as published in the combination *Nysius zealandicus*, of the type species of *Rhyodes* Stål, 1868, will not be added to the *Official List*, since it is not regarded by specialists as the oldest available trivial name for the species in question. The earlier name *clavicornis* Fabricius, 1794, as published in the combination *Lygaeus clavicornis*, that being, as Professor Usinger and Dr. Sailer explain, the trivial name now regarded by specialists as the oldest such name either subjectively or objectively available for the species in question, will, however, need to be placed on the *Official List*. Under the decision (under the Plenary Powers) recommended by Professor Usinger and Dr. Sailer, the generic name *Tyrrheneis* Kirkaldy, 1909, will become a junior objective synonym of *Artheneis* Spinola, 1837 (the two genera having the same species as their respective type species) and will need therefore to be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*. In their application Professor Usinger and Dr. Sailer point out that the generic name *Myersia* Evans, 1929 (*Bull. ent. Res.* 19 : 353) is a junior subjective synonym of *Rhyodes* Stål, 1868. In addition, it may be noted that the name *Myersia* Evans, 1929, is a junior homonym of *Myersia* Viereck, 1912 (*Proc. U.S. nat. Mus.* 43 (No. 1942) : 575) ; as such, it should therefore also be placed on the *Official Index*.

4. As regards the form of action under the Plenary Powers which would be necessary to secure the objects sought by Professor Usinger and Dr. Sailer, it may be recalled that at its Session held in Lisbon in 1935 the International Commission on Zoological Nomenclature took a decision on procedure in cases of this kind, when considering a long list of applications relating to the type species of genera in the Order Hymenoptera submitted by Professor J. Chester Bradley (1943, *Bull. zool. Nomencl.* 1 : 27—30). In view of the risk that, concealed in the literature, there might be some undetected type selection which, if not suppressed, might nullify the result sought to be obtained by the use of the Plenary Powers, if those powers were to be used solely to suppress some type designation or type selection that it was known would create confusion unless suppressed, the Commission formed the conclusion that it would be preferable to set aside all type selections made prior to the decision in question and itself to designate whatever species it was desired should be the type species of the genera concerned. The advantages of this procedure are so clear that it has become the standard practice in all cases of this kind.

5. In the light of the foregoing considerations, it may be convenient to summarise as follows the action which the International Commission on Zoological Nomenclature would need to take, in the event of its deciding to grant the substance of the application submitted to it in this matter, namely :—

- (1) to use its Plenary Powers to set aside all type selections for the under-mentioned genera made prior to the decision now proposed to be taken and to designate the species specified below to be the type species of the genera concerned :—

<i>Name of genus</i>	<i>Nominal species proposed to be designated as the type species of the genus specified in Col. (1)</i>
(1)	(2)
(a) <i>Nysius</i> Dallas, 1852	<i>Lygaeus thymi</i> Wolff, 1804
(b) <i>Artheneis</i> Spinola, 1837	<i>Artheneis foveolata</i> Spinola, 1837

- (2) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—

- (a) *Nysius* Dallas, 1852 (gender of generic name : masculine) (type species, by designation, as proposed in (1) (a) above, under the Plenary Powers : *Lygaeus thymi* Wolff, 1804) ;
- (b) *Artheneis* Spinola, 1837 (gender of generic name : feminine) (type species, by designation, as proposed in (1)(b) above, under the Plenary Powers : *Artheneis foveolata* Spinola, 1837) ;
- (c) *Rhyodes* Stål, 1868 (gender of generic name : masculine) (type species, by monotypy : *Nysius zealandicus* Dallas, 1852) ;

- (3) to place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology* :—

- (a) *thymi* Wolff, 1804, as published in the combination *Lygaeus thymi* (trivial name of species proposed, under (1)(a) above, to be designated under the Plenary Powers as type species of *Nysius* Dallas, 1852) ;
- (b) *foveolata* Spinola, 1837, as published in the combination *Artheneis foveolata* (trivial name of species proposed, under (1)(b) above, to be designated under the Plenary Powers as type species of *Artheneis* Spinola, 1837) ;

(c) *clavicornis* Fabricius, 1794, as published in the binominal combination *Lygaeus clavicornis* ;

(4) to place the under-mentioned generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

(a) *Tyrrheneis* Kirkaldy, 1909 (a junior objective synonym of *Artheneis* Spinola, 1837, under the decision proposed in (1)(b) above) ;

(b) *Myersia* Evans, 1929 (a junior homonym of *Myersia* Viereck, 1912).

6. Support received from Dr. W. E. China (British Museum (Natural History), London : On 30th May 1951 Dr. W. E. China (*British Museum (Natural History), London*), with whom Mr. Hemming had been in correspondence while preparing the supplementary note reproduced in the preceding paragraph, furnished the following statement in support of the proposals submitted by Dr. Usinger and Dr. Sailer :—

On the proposed use of the Plenary Powers to designate type species for "Nysius" Dallas, 1852, and "Artheneis" Spinola, 1837 (Class Insecta, Order Hemiptera) : support for the proposals submitted by Professor Robert L. Usinger and Dr. R. I. Sailer

By W. E. CHINA, Sc.D.

(*Deputy Keeper, Department of Entomology, British Museum (Natural History), London*)

(Enclosure to a letter dated 30th May 1951)

In my paper on the generic names of the British Heteroptera (1943, *The gen. Names brit. Ins.* (8) : 237) I pointed out (Note 1 to genus 2) that Distant (1903, *Faun. brit. India*, Rhyn. 2 : 17) was the first author validly to fix the type species of the genus *Nysius* Dallas, 1852 (*List Spec. hemipt. Ins. Coll. Brit. Mus.* 2 : 551). In consequence the generic name *Rhyphodes* Stål, 1868 (with type species *Nysius zealandicus* Dallas) became a synonym of *Nysius* Dallas, 1852, while *Nysius* auctt. nec Dallas had to take the next available name. By an extraordinary *lapsus*, I selected the relatively modern name *Macroparius* Stål, 1872 (type species : *Heterogaster* [sic] *graminicola* Kolenati), leaving the much older name *Artheneis* Spinola, 1837 (type species : *Artheneis cymoides* Spinola) as a synonym. By this mistaken sinking of *Artheneis* under *Macroparius*, I overlooked the serious consequences of transferring the type genus of the Lygaeid subfamily ARTHENEINAE to another

subfamily LYGAEINAE and even kept the subfamily ARTHENEINAE on page 238. The fact that the old genus *Artheneis* (type species: *A. foveolata* Spinola) does not occur in Britain made this error possible, as in my paper I tended to skim over non-British genera. When my attention was drawn to this slip by Dr. R. L. Usinger, I at once agreed with him that the case would have to be submitted to the International Commission on Zoological Nomenclature, in order to preserve the name of the type genus of the ARTHENEINAE and the well known generic concept *Nysius*. This case was set out by Usinger and Sailer in 1944 (*Proc. ent. Soc. Wash.* **46** (9) : 260—262) and I herewith express my complete concurrence with their opinions.

7. Publication of the present application : The present application and Mr. Hemming's supplementary note on the effect on that application of certain of the decisions taken by the Paris Congress in 1948 were sent to the printer at the end of May 1951. Immediately upon the receipt from Dr. China of the communication reproduced in paragraph 6 above, special arrangements were made to ensure that it should be printed in time for it to be published simultaneously with the application to which it related. All three documents were published on 28th September 1951 in Part 11 of volume 2 of the *Bulletin of Zoological Nomenclature* (Usinger & Sailer, 1951, *Bull. zool. Nomencl.* **2** : 313—314 ; Hemming, 1951, *ibid.* **2** : 315—317 ; China, 1951, *ibid.* **2** : 318).

8. Correction of a misprint in the proposal submitted in the Secretary's Supplementary Note : Immediately upon the publication of the papers referred to in the preceding paragraph, the Secretary placed the following Minute on the File relating to this case : " I note that through a slip of the pen the name *Myersia* Evans, 1929, is described in paragraph 5(4)(b) of my paper (*Bull.* **2** : 317) as a junior homonym of *Rhyphodes* Stål, 1868. This, of course, is incorrect. This name is invalid, but this is because it is a junior homonym of the name *Myersia* Viereck, 1912. This mistake is to be corrected accordingly".

9. Issue of Public Notices in 1951 : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 28th September 1951, both in Part 11 of volume 2 of the *Bulletin of Zoological Nomenclature* (the part in which

the application submitted by Dr. Usinger and Dr. Sailer was published) and also to the other prescribed serial publications. As in the case of the Public Notice given in 1947 (paragraph 3 above), the publication of these Notices in 1951 elicited no objection to the action proposed.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

10. Issue of Voting Paper V.P.(52)39 : On 9th May 1952, a Voting Paper (V.P.(52)39) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal “relating to the names *Nysius* and *Artheneis* as set out in paragraph 5 (Points (1) to (4)) on pages 316 and 317 of volume 2 of the *Bulletin of Zoological Nomenclature*” [i.e., in the concluding paragraph of the note by the Secretary reproduced in paragraph 5 of the present *Opinion*].

11. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 9th August 1952.

12. Particulars of the Voting on Voting Paper V.P.(52)39: The state of the voting on Voting Paper V.P.(52)39 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Riley ; Dymond ; Calman ; Hankó ; Bonnet ;
Vokes ; do Amaral ; Pearson ; Hemming ; Bradley ;
Esaki ; Lemche ; Stoll ; Cabrera ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned, two (2)* :

Jaczewski ; Mertens.

13. Declaration of Result of Vote : On 11th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)39, signed a Certificate that the Votes cast were as set out in paragraph 12 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

14. On 18th March 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)39.

15. The following are the original references for the names placed on *Official Lists* and *Official Indexes* in the Ruling given in the present *Opinion* :—

- Artheneis* Spinola, 1837, *Essai Genres Ins. Ordre Hémipt.* : 250
clavicornis, Lygaeus, Fabricius, 1794, *Ent. syst.* 4 : 169
foveolata, *Artheneis*, Spinola, 1837, *Essai Genres Ins. Ordre Hémipt.* : 253
Myersia Evans, 1929, *Bull. ent. Res.* 19 : 353
Nysius Dallas, 1852, *List Spec. Hemipt. Ins. Brit. Mus.* (2) : 551
Rhyodes Stål, 1868, *K. svensk. Vetensk. Akad. Handl.*, Stockholm (n.f.) 7 (No. 11) : 76
thymi, Lygaeus, Wolff, 1804, *Icon. Cimicum* (4) : 149
Tyrrheneis Kirkaldy, 1909, *Canad. Ent.* 41 : 31

16. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(C.) 75 has been allotted.

17. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

18. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

19. The present *Opinion* shall be known as *Opinion* Three Hundred and Nineteen (319) of the International Commission on Zoological Nomenclature.

DONE in London, this Eighteenth day of April, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

VOLUME 9. Part 10. Pp. 147—170

OPINION 320

Validation, under the Plenary Powers, of the generic name *Limulus* Müller (O.F.), 1785 (Class Merostomata) and confirmation of the entry of that name on the *Official List of Generic Names in Zoology* (validation of an error in *Opinion* 104)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 320

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England.*)

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil.*)

Secretary : Mr. Francis Hemming (*London, England.*)

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology.*)

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 320

VALIDATION, UNDER THE PLENARY POWERS, OF THE
GENERIC NAME "LIMULUS" MULLER (O.F.), 1785
(CLASS MEROSTOMATA) AND CONFIRMATION
OF THE ENTRY OF THAT NAME ON THE
"OFFICIAL LIST OF GENERIC NAMES
IN ZOOLOGY" (VALIDATION OF
AN ERROR IN "OPINION" 104)

RULING :—(1) Under the Plenary Powers the generic name *Xiphosura* Brünnich, 1771, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(2) In view of (1) above, the entry of the generic name *Limulus* Müller (O.F.), 1785, on the *Official List of Generic Names in Zoology* made under the Ruling given in *Opinion* 104 is hereby confirmed.

(3) The under-mentioned generic names or reputed generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Names Nos. 177 to 181 respectively :—(a) *Xiphosura* Gronovius, 1764 (a name published in a work rejected for nomenclatorial purposes); (b) *Xiphosura* Brünnich, 1771, as suppressed, under the Plenary Powers, under (1) above; (c) *Xiphosura* Scopoli, 1777 (a junior homonym of *Xiphosura* Brünnich, 1771); (d) *Xiphosura* Meuschen, 1778 (a name published in a work rejected for nomenclatorial purposes); (e) *Xiphisura* Brünnich, 1771 (an Invalid Original Spelling of *Xiphosura* Brünnich, 1771, suppressed, under the Plenary Powers, under (1) above).

(4) The under-mentioned name is hereby placed on the *Official List of Specific Names in Zoology* as Name No. 199 : *polyphemus* Linnaeus, 1758, as published in the combination *Monoculus polyphemus* (specific name of type species of *Limulus* Müller (O.F.), 1785).

I.—THE STATEMENT OF THE CASE

The case dealt with in the present *Opinion* arose independently in two ways. First, the approval of the application submitted by Mr. R. Winckworth for a Ruling that the work by Brünnich entitled *Zoologiae Fundamenta*¹ published in 1771 (not in 1772 as commonly stated)² by the Commission at its Session held in Paris in 1948 rendered *Xiphosura* Brünnich, 1771 (type species, by monotypy: *Monoculus polyphemus* Linnaeus, 1758) an available name and a senior objective synonym of the well-known name *Limulus* Müller (O.F.), 1785. Second, this development called for immediate action by the International Commission, quite irrespective of the question whether, in the interests of nomenclatorial stability, steps ought to be taken to preserve the name *Limulus* Müller, for the latter name had been placed by the Commission on the *Official List of Generic Names in Zoology* in 1928 under the Ruling given in its *Opinion* 104 (1928, *Smithson. misc. Coll.* 73 (No. 5) : 25—28) in the mistaken belief that it was an available and valid name. In the circumstances it was essential that the entry of this name on the *Official List* should be either validated or deleted. This question was brought to the attention of the Commission by the Acting President (Mr. Francis Hemming) at its Session held in Paris in 1948 (Paris Session, 12th Meeting, Conclusion 5) immediately after it had taken a decision in favour of the availability of Brünnich's *Zoologiae Fundamenta*. The following is an extract from the Official Record of the Proceedings of the Commission at the foregoing meeting, giving the decision then taken in this matter (1950, *Bull. zool. Nomencl.* 4 : 312) :—

THE COMMISSION agreed :—

that consideration should be given as soon as possible after the close of the present (Paris) Congress to the

¹ This decision has since been embodied in *Opinion* 236 (1954, *Ops. Decls. int. Comm. zool. Nomencl.* 4 : 329—342).

² For a note on the correct date for Brünnich's *Zoologiae Fundamenta*, see paragraph 4 of *Opinion* 236.

question whether the name *Limulus* Müller, 1785, erroneously placed on the *Official List of Generic Names in Zoology* by *Opinion* 104 should be validated under the Plenary Powers or alternatively be removed from the *Official List*, and that to this end the Secretary to the Commission be asked to prepare a Report on this subject, with recommendations, for the consideration of the Commission.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present case : As a preliminary to action being taken to initiate the investigation decided upon by the Commission at its Paris Session, the problem presented by the names *Xiphosura* Brünnich and *Limulus* Müller was allotted the Registered Number Z.N.(S.) 506.

3. Preliminary consultations : The Official Record of the Proceedings of the International Commission at its Paris Session was published in 1950 and, as soon as was practicable thereafter, the Secretary entered into consultations in regard to this case with interested specialists. These consultations elicited comments from (1) Professor H. Munro Fox (*London University, Bedford College for Women, Department of Zoology, London*) and (2) Dr. Carl O. Dunbar (*Yale University, Peabody Museum of Natural History, New Haven, Connecticut, U.S.A.*). The communications so received are given in the immediately following paragraphs.

4. View expressed by Professor Munro Fox (London University) : The following is the text of a letter dated 12th March 1951 received from Professor H. Munro Fox (*London University,*

Bedford College for Women, Department of Zoology, London) in regard to the present case :—

The case of “*Limulus*” Müller, 1785

I am strongly of the opinion that the generic name *Limulus* Müller should be validated and confirmed on the *Official List of Generic Names in Zoology*. The contrary course would be most undesirable both because of text-book usage and because of the undesirability of removing a name from the *Official List*.

5. View expressed by Dr. Carl O. Dunbar (Yale University, Peabody Museum of Natural History, New Haven, Connecticut, U.S.A.) : In a letter dated 23rd May 1951, Dr. Carl O. Dunbar (*Yale University, Peabody Museum of Natural History, New Haven, Connecticut, U.S.A.*) submitted the following statement of his views on the present case :—

“*Limulus*” Müller (O.F.), 1785

I think that both the *Official List of Generic Names* and the provision for the use of the Plenary Powers are desirable as a proper means of escape from unnecessary confusion, sometimes produced by rigid application of the rule of priority, against which a good many systematists are inclined to rebel. It would seem to me therefore that the name *Limulus* Müller, having been established by being placed on the *Official List*, cannot be displaced by *Xiphosura* Brünnich unless the Commission saw fit to take the positive action of removing it from the *List*.

As for the merits of the case, I believe no useful purpose would be gained by replacing the name *Limulus* which is so well established in the literature of the world. On the other hand, definite confusion would result from use of the name *Xiphosura* for a genus within the Order Xiphosura.

6. Application submitted by Professor Leif Størmer (Paleontogisk Institutt, Oslo, Norway) : On 30th March 1951 Professor

Leif Størmer (*Paleontologisk Institutt, Oslo, Norway*) addressed a letter to the Commission expressing a wish for a ruling on the relative status of the names *Xiphosura* Brünnich, 1771, and *Limulus* Müller (O.F.), 1785. Since this was precisely the question which in 1948 the Commission had invited Mr. Hemming to investigate, he took the view that the best means of discharging the duty so imposed upon him would be to invite Professor Størmer, as a specialist in the group concerned, to submit, for the consideration of the Commission, a statement of the issues involved, with his recommendations as to the action which it was desirable should be taken. Professor Størmer consented to undertake this task and on 19th May 1951 he submitted the following application :—

Proposed use of the Plenary Powers to validate the entry on the " Official List of Generic Names in Zoology " of the name " Limulus " Müller, 1785 (Class Merostomata*) : proposed correction of an error in " Opinion " 104

By LEIF STØRMER

(*Paleontologisk Institutt, Oslo, Norway*)

1. The object of the present application is to obtain from the International Commission on Zoological Nomenclature the use of its Plenary Powers for the purpose of suppressing the generic name *Xiphosura* Brünnich, 1771, in order thereby to render the name *Limulus* Müller, 1785 (Class Merostomata*) the oldest available name for, and therefore the valid name of, the genus now habitually known by that name. From the point of view of the present applicant, who is engaged in preparing the chapter on Merostomata for the forthcoming International *Treatise on Invertebrate Paleontology*, the present case is one of exceptional urgency, for it is essential that a decision should be provided on the issue now submitted in time for it to be included in the relevant portion of the *Treatise*. It is particularly hoped, therefore, that it will be possible for the International Commission to reach a very early decision on the present application.

2. The facts of this case are as follows : In 1928, in *Opinion* 104 (*Smithson. misc. Coll.* 73 (No. 5) : 25) the International Commission

* Or Class Arachnida.

on Zoological Nomenclature placed on the *Official List of Generic Names in Zoology* the generic name *Limulus* Müller (O.F.), 1785 (type species, by monotypy: *Monoculus polyphemus* Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1: 634). This extremely well-known name, which was then in universal use—as it still is today—was regarded not only as a nomenclatorially valid name, but also as the oldest available name for the genus in question. In 1940, however, Mr. R. Winckworth submitted a request to the International Commission (*Bull. zool. Nomencl.* 1: 113—117) for a ruling on the question whether in his *Zoologiae Fundamenta* (then believed to have been published in 1772, but now known to have been first published in 1771) Brünnich had applied the principles of binominal nomenclature. Winckworth pointed out that, if the Commission were to give an affirmative answer to the foregoing question, there were a number of generic names which would in future rank for priority as from the *Zool. Fund.* and that one of these names, *Xiphosura* Brünnich (: 208), was older than, and would replace, the well-known name *Limulus* Müller, 1785. At Paris in 1948 the International Commission ruled in favour of the availability of the names in Brünnich's *Zoologiae Fundamenta*, holding the view that in this work Brünnich had duly complied with the requirements of Proviso (b) to Article 25 of the *Règles* (see 1950, *Bull. zool. Nomencl.* 4: 307—310).

3. Having reached this general decision, the International Commission turned to consider the new names in the *Fundamenta* of Brünnich, of which it now became necessary to take account. When the Commission reached the name *Xiphosura* Brünnich, the Acting President (Mr. Francis Hemming) drew attention to the fact that the acceptance of this generic name would be objectionable from two points of view (1950, *loc. cit.* 4: 311—312). First, that name, if accepted, would displace the time-honoured name *Limulus* Müller, which, moreover, had already been on the *Official List* for twenty years; second, the use of this word as a generic name would be confusing, in view of the fact that it was in general use as the name of the Order to which this genus belonged. The Commission did not feel able on that occasion to reach a decision on this question, but agreed that as soon as possible after the close of the Paris Congress consideration should be given to the question whether or not the Plenary Powers should be used for the purpose of validating the generic name *Limulus* Müller and thereby of regularising the position of that name on the *Official List* (1950, *loc. cit.* 4: 312). At the same time the Commission asked the Secretary to confer with specialists and, having done so, to submit a Report to the Commission for consideration.

4. It will be seen, therefore, that the subject of the present application is one to which the Commission has already given preliminary

consideration and on which it has asked for the views of specialists. Thus, the present application, although prompted mainly by a different object, namely a desire to obtain a decision needed for the preparation of the *Treatise on Invertebrate Paleontology*, will serve also to provide a basis for the consideration of the question to which the Commission gave special consideration in Paris, namely whether the position on the *Official List* of the name *Limulus* Müller should be regularised or, alternatively, whether that name should be removed from the *Official List*, the name *Xiphosura* Brünnich being added thereto in its place.

5. As has already been explained, the generic name *Limulus* Müller is in general use for the genus to which it was first applied by Müller, one hundred and sixty-six years ago. It is true that in 1902 (*Ann. Mag. nat. Hist.* (7) 9 : 260) Pocock sought to replace the name *Limulus* Müller by the older name *Xiphosura* Gronovius, 1764 (*Zoophylac. gron.* 2 : 220) but this proposal of his won no support from other workers. Moreover, the *Zoophylacium gronovianum*, as from which Pocock dated the name *Xiphosura* was written by an author (Gronovius) who, though a so-called "binary" author, did not apply the principles of binominal nomenclature.³ At the time that Pocock wrote his paper there was room for argument whether a generic name published by such an author possessed any status in zoological nomenclature and this doubt persisted until 1948 when the International Congress of Zoology made it quite clear that such names possess no status in zoological nomenclature, by deleting the ambiguous expression "nomenclature binaire" from the *Règles*, inserting in its place the perfectly definite expression "nomenclature binominale" (1950, *Bull. zool. Nomencl.* 4 : 63—66). It is now perfectly clear that the alleged generic name *Xiphosura* Gronovius, 1764, possesses no standing in zoological nomenclature. This objection does not however apply to the name *Xiphosura* Brünnich, 1771, which is undoubtedly an available name. In view of the current general acceptance of the generic name *Limulus* Müller and the long period in which it has been in use, the desirability of promoting stability in nomenclature points strongly in favour of the preservation of the name *Limulus* Müller, as against the name *Xiphosura* Brünnich. These considerations are enormously strengthened by the fact that for over twenty years the name *Limulus* Müller has occupied an unchallenged position on the *Official List of Generic Names in Zoology*. The arguments would need to be very strong to justify the dethronement of the name *Limulus* Müller for the benefit of the unknown name *Xiphosura* Brünnich. In actual fact there are no arguments that can be advanced in favour of the overthrow of existing practice in this matter, apart from that based on the

³ The work by Gronovius entitled *Museum gronovianum* has since been formally rejected by the Commission in *Opinion* 261 (1954, *Ops. Decls. int. Comm. zool. Nomencl.* 5 : 281—296).

consideration that Brünnich's name *Xiphosura* was published fourteen years before Müller's name *Limulus*. The Law of Priority possesses many merits, but it is important always to remember that that Law was fashioned to promote stability and uniformity in nomenclature and consequently that the purpose of that Law is defeated if, by an unduly rigid application of its provisions, it is allowed to become an instrument for overturning well-established nomenclatorial practice. There are therefore very strong grounds in favour of the use by the International Commission of its Plenary Powers to preserve the name *Limulus* Müller.

6. This matter is not, however, the sole concern of the student of the taxonomy of the living and fossil forms concerned. For the name *Limulus* Müller is deeply embedded in the literature of the morphology and ontogeny of this interesting group, and to the workers in the field of applied biology changes of well-known names for narrow technical reasons of a purely nomenclatorial character are peculiarly irritating and incomprehensible. Moreover, the International Congress of Zoology has given express directions that the interests of this class of worker are to be given special consideration by the International Commission in considering cases involving the possible displacement of well-known names (*see*, 1950, *Bull. zool. Nomencl.* 4 : 234—235). For this reason also it is highly desirable that the International Commission should use its Plenary Powers to prevent the supersession of the name *Limulus* Müller.

7. Finally, it must be observed that (as was pointed out in the discussion of this case in Paris) we are confronted here also with a reason of quite a different kind which would make it most undesirable that the name *Xiphosura* Brünnich should replace the name *Limulus* Müller. This is because the word (*Xiphosura*) of which Brünnich's name consists or derivatives of that word are commonly used to denote the higher categories to which the genus now known as *Limulus* belongs. Thus, according to the taxonomic view taken of the categories which should be recognised, the word "*Xiphosura*" is in use as the name of the Sub-Class or Order concerned, while the word "*Xiphosurida*" is used as the name of the Order. The Commission has ruled (*in Opinion* 102) that a generic name is not invalidated by the prior use, as an ordinal name, of the word of which that generic name is composed and this provision has since been incorporated in the *Règles*; in deciding so to codify this provision, the International Congress of Zoology decided also to insert a *Recommendation* deprecating the selection, as generic names, of words previously used as the names of units of Sub-Ordinal or higher category (1950, *Bull. zool. Nomencl.* 4 : 164—165). In the present case, the use of the word "*Xiphosura*" as a generic name could not fail to give rise to confusion in the nomenclature of this group, and it is therefore extremely desirable from this

point of view alone that the Commission should use its Plenary Powers to suppress the generic name *Xiphosura* Brünnich, 1771.

8. For the reasons set forth above, I ask the International Commission on Zoological Nomenclature :—

- (1) to use its Plenary Powers to suppress the generic name *Xiphosura* Brünnich, 1771, for the purposes of the Law of Priority, but not for those of the Law of Homonymy ;
- (2) in view of (1) above, to confirm the generic name *Limulus* Müller, 1785, on the *Official List of Generic Names in Zoology*;
- (3) to place the under-mentioned generic names or reputed generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology*:—
 - (a) *Xiphosura* Gronovius, 1764 (an invalid name because published by an author who did not apply the principles of binominal nomenclature) ;
 - (b) *Xiphosura* Brünnich, 1771 (a name proposed, under (1) above, to be suppressed under the Plenary Powers) ;
- (4) to place on the *Official List of Specific Trivial Names in Zoology* the trivial name *polyphemus* Linnaeus, 1758, as published in the binominal combination *Monoculus polyphemus* (trivial name of the type species of *Limulus* Müller, 1785).

7. Publication of the present application : Professor Størmer's application and the earlier comments received from Professor Munro Fox (paragraph 3) and Dr. Carl O. Dunbar (paragraph 4) were sent to the printer on 27th May 1951 and were published on 28th September 1951 in Part 11 of volume 2 of the *Bulletin of Zoological Nomenclature* (Størmer, 1951, *Bull. zool. Nomencl.* 2 : 319—322 ; Fox, 1951, *ibid.* 2 : 322 ; Dunbar, 1951, *ibid.* 2 : 323).

8. Issue of Public Notices : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology,

Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 28th September 1951 both in Part 11 of volume 2 of the *Bulletin of Zoological Nomenclature* (the Part in which Professor Størmer's application was published) and to the other prescribed serial publications. The publication of these Notices elicited no objection during the prescribed period.

9. Support received for the present application : The publication of Professor Størmer's application and of the Public Notices regarding it elicited support from the following specialists :— (1) Rudolf Richter (*Natur-Museum u. Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a. Main, Germany*) ; (2) Joshua L. Baily, Jr. (*San Diego, California, U.S.A.*).

10. Support received from Professor Dr. Rudolf Richter (Natur-Museum und Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a. M., Germany) : On 18th October 1951, Professor Dr. Rudolf Richter (*Natur-Museum und Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a. M.*) addressed to the Commission the following letter in support of Professor Størmer's application (Richter, 1952, *Bull. zool. Nomencl.* **6** : 221) :—

Begründung :

Der Internationale Zoologen-Kongress hat die Möglichkeit zur Suspension der Regeln mit der ausdrücklichen Absicht geschaffen, Namen von so allgemeiner Gebrauchlichkeit wie *Limulus* zu schützen.

Eine andere Entscheidung würde nicht die Zustimmung der Zoologen und Paläontologen finden.

Ausserdem würde die Autorität der Internationalen Regeln und der Internationalen Kommission nicht befestigt werden, wenn der Name *Limulus*, nachdem er 1928 auf die Offizielle Liste gesetzt worden war, nicht den Schutz der Kommission finden würde.

Ich verweise auf den Antrag (den ich zur gleichen Zeit an die Kommission einreichte), dass sämtliche Namen, die auf die Offizielle

Liste gesetzt worden sind, unter Suspension der Regeln endgültig geschützt werden. (*Bull. zool. Nomencl.* 6 : 184—185.)

11. Support received from Dr. Joshua L. Baily, Jr. (San Diego, California, U.S.A.) : On 24th October 1951, Dr. Joshua L. Baily, Jr. (*San Diego, California, U.S.A.*) addressed a letter to the Commission in which he furnished the following statement in support of the retention of the generic name *Limulus* Müller, 1785 (Baily, 1952, *Bull. zool. Nomencl.* 6 : 221—222) :—

1. Application Z.N.(S.) 506 is concerned with a name (*Limulus*) which has been on the *Official List* for more than two decades. Its reconsideration at this time would therefore weaken the value of the *Official List*, regardless of the nature of the action taken. The *Official List* is the greatest instrument for the stabilization of nomenclature that has yet been devised and any action likely to weaken it is to be deprecated.

2. Attention should here be called to application Z.N.(S.) 544 relating to the name *Astacus*,⁴ which is essentially parallel. In each case a name has long been on the *Official List*; in each case an older name has been subsequently discovered which would have been available if discovered earlier; in each case the petitioner fears the possibility of action which might jeopardize the status of the established name. In the latter case, however, the proponent of the application has not asked for the confirmation of the established name, but merely for the suppression of the older name which threatens it.

3. It would be quite in order for the Commission to issue an *Opinion* to the effect that *Limulus* and *Astacus* are closed cases which cannot be re-opened on any ground, but to reconsider these cases even for the purpose of confirming earlier actions would be objectionable, as such a course would establish a precedent for re-opening any case in which a neglected name unexpectedly comes to light. It is true that I have asked the Commission several times to reconsider cases which they presumably considered closed, but I have never done so in the case of a name already on the *Official List*. Had these names been placed on the *Official List* I would have accepted that decision as irrevocable.

4. Other things being equal, the earlier published of two synonyms is entitled to priority, but in this case other things are not equal. *Limulus* is on the *Official List*; *Xiphosura* is not, and the only way

⁴ The application here referred to has since been granted by the International Commission, and its decision has been embodied in *Opinion* 349 (in the press).

in which parity for the two names can be achieved is for the Commission to place *Xiphosura* on the *Official List* with the same type. To me this action is unthinkable, but in order to preclude it absolutely, I would suggest either one (or even both) of the two following courses : The first of these would be to place *Xiphosura* on the *List of Rejected Names*. This action has been requested in the application and I am strongly in favour of it. The other course would be to issue a ruling that after a species has been recorded on the *Official List of Generic Names in Zoology* as the type of a genus placed on that list it will thereby become automatically ineligible for designation as type of a generic name later placed on the list.

5. I am not a student of the group to which *Limulus* belongs, but this case is one that goes to the heart of all zoological nomenclature, and any student in any field of systematic zoology will feel the effect of the decision in this case. Therefore I am now requesting that the Commission take the latter course outlined above, and declare that *Limulus* can never be removed from the *Official List*, and that the species *Monoculus polyphemus* can never be legally designated as the type species of any other genus.

12. Appeal to specialists for advice issued in 1952 : In the autumn of 1951, Mr. Hemming, as Secretary, decided to publish a series of brief Reports on the stage reached in the various investigations which he had been invited to undertake by the Paris Congress of 1948 and to take advantage of the opportunity so presented of making a further appeal to interested specialists to furnish statements of their views as to the action which it was desirable should be taken in the present case (Hemming, 1952, *Bull. zool. Nomencl.* 7 : 196).

Case 2 : Status of the generic name "Limulus" Müller (O.F.), 1785 (Class Merostomata)

4. The problem to be considered here is whether action should be taken under the Plenary Powers to prevent the very well-known generic name *Limulus* Müller (O.F.), 1785 (Class Merostomata) from being replaced by the hitherto virtually unused name *Xiphosura* Brünnich, 1771, found to be an available name as the result of the decision that in his *Zoologiae Fundamenta* of 1771 (in which this name was published) Brünnich satisfied the requirements of Proviso (b) to Article 25. A subsidiary question involved in the foregoing problem arises from the fact that as long ago as 1928 the name *Limulus* Müller was placed on

the *Official List of Generic Names in Zoology*. A comprehensive statement of the issues involved in this case, with recommendations as to the action which it is desirable should be taken, has been submitted by Professor Leif Størmer (*Oslo*). This has now been published in the *Bulletin of Zoological Nomenclature* (1951, *Bull. zool. Nomencl.* 2 : 319—322); the proposals so submitted are supported by Professor Munro Fox (*London University*) (: 322) and Dr. Carl O. Dunbar (*Yale University*) (: 323).

13. Support received from Professor H. Engel (Zoologisch Museum, Amsterdam, The Netherlands) : On 12th April 1952, Professor H. Engel (*Zoologisch Museum, Amsterdam, The Netherlands*) addressed a letter to the Commission in regard to this and a number of other cases on which appeals for advice had then just been published in volume 7 of the *Bulletin of Zoological Nomenclature* (paragraph 12). The following extract relates to the present case :—“ In answer to your request in *Bull. zool. Nomencl.*, vol. 7, Part 7/8, it is my opinion, as regards Case 2 (Z.N.(S.) 506) (page 196), that *Limulus* should not be replaced by *Xiphosura*.”

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

14. Issue of Voting Paper V.P.(52)40 : On 9th May 1952 a Voting Paper (V.P.(52)40) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal “ relating to the name *Limulus* Müller, 1785, as set out in Points (1) to (4) in paragraph 8 on page 322 of volume 2 of the *Bulletin of Zoological Nomenclature* ” [i.e. for the Points,

numbered as shown above, set in the concluding paragraph of the application by Professor Leif Størmer reproduced in paragraph 6 of the present *Opinion*].

15. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 9th August 1952.

16. Communication received during the Voting Period from Dr. John H. Lochhead (Marine Biological Laboratory, Woods Hole, Massachusetts, U.S.A.) : On 30th July 1952—i.e. within ten days of the close of the Prescribed Voting Period—there was received a letter, with enclosure, dated 21st July 1952 in regard to the present case from Dr. John H. Lochhead (*Marine Biological Laboratory, Woods Hole, Massachusetts, U.S.A.*). The document so received was the following :—

Some additional facts that should be considered in regard to the proposals that the name “*Limulus*” Muller, 1785, (Class Merostomata) be retained on the “Official List of Generic Names in Zoology”, and that the alternative generic name “*Xiphosura*” be placed on the “Official Index of Rejected and Invalid Generic Names in Zoology”

By JOHN H. LOCHHEAD

(*Department of Zoology, University of Vermont, Burlington, Vermont, U.S.A., and Marine Biological Laboratory, Woods Hole, Mass., U.S.A.*)

1. Although the six-month period is now over, during which comments were invited on the *Limulus* versus *Xiphosura* controversy, I, like a great many other zoologists, have access to a large library but once a year. Thus it is only just recently that I have been able to see the published correspondence dealing with this dispute. Perhaps it is not too late for me to submit a few comments for consideration by the Commission.

2. First, I believe that the record should be set straight as to the extent that the generic name *Xiphosura* has come into use. Those who have written to Secretary Hemming on the case thus far either do not discuss this point, or imply that the name *Limulus* is now employed almost universally (Størmer, 1951, *Bull. zool. Nomencl.* 2 : 319—322 ; Fox, *ibid.* 2 : 322 ; Dunbar, *ibid.* 2 : 323 ; Richter, 1952, *ibid.* 6 : 221 ;

Baily, *ibid.* 6 : 221—222). Certainly it is true that a large majority of the published papers, chiefly physiological, use the name *Limulus*. But a number of papers, including especially the most recent authoritative reviews, have used the generic name *Xiphosura*. I append a list of some of these papers, and would call attention particularly to those of Gerhardt, in Kükenthal's *Handbuch*, Louis Page, in Grassé's *Traité de Zoologie*, and Petrunkevitch, in the *Encyclopaedia Britannica*. My own interest in the matter arose when I was asked to write the chapter on the animal in question in "*Selected Invertebrate Types*". I quickly found that, as just indicated, those who seemed most likely to know were agreed in using the generic name *Xiphosura*, following Pocock (1902). Not being a taxonomist, I was unaware of the Commission's actions in setting aside the names of Gronovius (*Opinion* 89) and in placing *Limulus* on the *Official List* (*Opinion* 104). Thus I added one more to the list of reviews employing the generic name *Xiphosura*. The situation at the present time is that anyone who turns to the literature for a reasonably detailed review of this animal, whether in English, French, or German, will find it referred to as *Xiphosura*.

3. My second point is in regard to early authors who have used the generic name *Xiphosura* prior to 1785, when Müller proposed the name *Limulus*. Only two such authors have been mentioned in the present correspondence to date, namely Gronovius (1764) and Brünnich (1771). I believe that two others should be added. Shortly after "*Selected Invertebrate Types*" was in the press, I discovered the presence of the name *Limulus* on the *Official List*. I wrote to Dr. Fenner A. Chace, Jr., of the U.S. National Museum in Washington, to enquire about the legality of a name placed in error on the *Official List* (a point which has been happily cleared up by the amendment to the *Règles* reported, 1950, in the *Bull. zool. Nomencl.* 4 : 268). In his very kind reply Dr. Chace mentioned that he had discovered a note in Miss Rathbun's handwriting to the effect that in addition to Gronovius and Brünnich, two other early authors had employed the generic name *Xiphosura*, namely Scopoli, 1777 (*Introduc. Hist. nat.* : 405) and Meuschen, 1778 (*Mus. Gronov.* : 83). I have not been able to consult either of these two books, but if Miss Rathbun's report is correct it should be taken into consideration when the Commission renders its *Opinion*. Meuschen's names have already been set aside by the Commission (see 1950, *Bull. zool. Nomencl.* 4 : 571—573), but Scopoli's names seem likely to be accepted, if we may judge from the conclusions reached independently by Baily (1951, *Bull. zool. Nomencl.* 6 : 68) and Hemming (*ibid.* 6 : 122—125).⁵

⁵ The application that Scopoli's *Introductio ad Historiam naturalem* of 1777 be accepted for nomenclatorial purposes has since been approved by the International Commission, and its decision has been embodied in *Opinion* 329 (in the press).

4. Despite the findings which I have reported above, I remain in full agreement with those who wish to see *Limulus* retained on the *Official List* and *Xiphosura* placed on the *Official Index of Rejected and Invalid Generic Names*. The latter action should be done in such a way as to cover *Xiphosura* Brünnich, 1771, *Xiphosura* Scopoli, 1777, *Xiphosura* Gronovius, 1764, and *Xiphosura* Meuschen, 1778. Legally it perhaps would not be necessary to make specific mention of the two latter authors, since the Commission already has rejected their works *in toto*. Nevertheless I believe that it would be desirable to mention all four authors, for the benefit of zoologists not familiar with previous actions of the Commission. Alternatively, if there are no legal objections, it might be possible to reject *Xiphosura* as used or proposed by any author in or prior to the year 1785 (the date when Müller proposed *Limulus*).

5. In regard to the retention of names on an *Official List*, I am not in agreement with Baily (1952, *Bull. zool. Nomencl.* 6 : 221—222) that a name once on that *List* should never be reconsidered. But I do feel that no names should be removed from an *Official List* for other than the most urgent reasons. In future years, after the *Lists* have been published and have gained reasonably wide circulation among zoologists, it should be considered progressively more difficult to remove a name the longer it has been on one of the *Lists*.

6. Those who have used the generic name *Xiphosura* in the recent past probably have done so either (like myself) in ignorance of the fact that *Limulus* had been placed on the *Official List*, or in the belief that because the Commission had acted in error its ruling was not legally binding. In this connection it may be noted that *Opinion* 104 gave none of the reasons that led to the placing of *Limulus* on the *Official List*, stating merely that the Secretary believed the name to be "nomenclatorially available and valid". When I first read this *Opinion* I was unaware that the Commission earlier had set aside the names of Gronovius. Thus I at once was in doubt as to the legal validity of the Commission's action in placing *Limulus* on the *Official List* "in harmony with the Rules".

7. In comparison with this record of confusion in the past, the future now looks much more hopeful. Full publication of the arguments involved in each case, the promised publication of *Official Lists* and of *Official Indexes of Rejected and Invalid Names*, both for genera and species, and the suggested publication of an *Official Index of Rejected and Invalid Books* (1952, *Bull. zool. Nomencl.* 7 : 164), all should go far towards securing a much greater uniformity and stability among zoologists in their use of taxonomic names. It is this hope for the future that has made it seem worth while to me to urge the

retention of *Limulus* on the *Official List* and the rejection of the generic name *Xiphosura*.

Some recent papers using the generic name "Xiphosura"

- Fage, L. 1949. Classe des merostomacés (Merostomata, Woodward (1866). Grassé's *Traité de Zoologie* 6 : 219—262.
- Gerhardt, U. 1932 and 1935. Erste Klasse der Chelicerata, Merostoma. *Kükenthal u. Krumbach's Handbuch der Zool.* 3 (H. 2, Lief. 3) : 10—32, and 3 (H. 2, Lief. 8) : 33—96.
- Gravier, C. 1929. L'appendice caudal des limules. *Bull. Mus. nat. Hist. nat. Paris* (2) 1 : 94—99.
- Gravier, C. 1929. Révision de la collection des limules du Muséum national d'Histoire naturelle. *Bull. Mus. nat. Hist. nat. Paris* (2) 1 : 313—331.
- Gravier, C. 1929. Les appendices fouisseurs des limules. *Arch. Anat. micr.* 25 : 270—279.
- Lafon, M. 1943. Sur la structure et la composition chimique du tégument de la limule (*Xiphosura polyphemus* L.). *Bull. Inst. océanogr. Monaco*, 40 (850) : 1—11.
- Lochhead, J. H. 1950. Arthropoda. *Xiphosura polyphemus. Selected Invertebrate Types* (Ed. F. A. Brown, Jr.) : 360—381, 584—585. Wiley, New York.
- Petrunkevitch, A. 1947. *Xiphosura. Encyclopaedia Britannica* : App.
- Vachon, M. 1945—6. Remarques sur les appendices du prosoma des limules et leur arthrogenèse. *Arch. Zool. exp. gén.* 84 : 271—300.

17. Action taken on the supplementary point raised by Dr. John H. Lochhead : On receipt of the communication from Dr. John H. Lochhead reproduced in the immediately preceding paragraph, Mr. Hemming, as Secretary, placed (on 31st July 1952) the following Minute in File Z.N.(S.) 506 :—

"Limulus" and "Xiphosura" : an additional point brought out in the statement furnished by Dr. John H. Lochhead

By FRANCIS HEMMING,

Secretary to the International Commission on Zoological Nomenclature

In the statement enclosed with his letter of 21st July 1952, Dr. John H. Lochhead has drawn attention to the fact that, in addition

to the use of the generic name *Xiphosura* (1) by Brünnich, 1771, which Professor Leif Størmer has recommended should now be suppressed by the Commission under its Plenary Powers and (2) by Gronovius in 1764 in the *Zoophylacium Gronovianum* (a name which is invalid by reason of having been published in a non-binominal work), there are two other uses of the name *Xiphosura* prior to the publication of the name *Limulus* Müller (O.F.), 1785. These are:—(a) *Xiphosura* Scopoli, 1777, and *Xiphosura* Meuschen, 1778. Dr. Lochhead suggests that these names also should now be finally disposed of.

2. The proposal now before the Commission is that the name *Xiphosura* Brünnich, 1771, should be suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy. Accordingly, under this proposal the two names mentioned by Dr. Lochhead will remain invalid names as being junior homonyms of *Xiphosura* Brünnich, 1771. Apart from this, the name *Xiphosura* Meuschen, 1778, is invalid for another reason, as the work in which this name was published—the *Museum Gronovianum*—has been declared by the Commission to be a work which is not available for zoological nomenclature (1950, *Bull. zool. Nomencl.* 4 : 571—573⁶).

3. In these circumstances the only action which is required in this matter is that the names *Xiphosura* Scopoli, 1777, and *Xiphosura* Meuschen, 1778, should now be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*. Under the Rules laid down in Paris (a) that in future the Ruling in every *Opinion* shall cover the whole of the subject matter of the application concerned and (b) that all invalid names involved in any case submitted to the Commission shall be placed on the appropriate *Official Index*, the two names referred to above fall now to be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*. It is hereby directed that entries to this effect be included in the Ruling to be given in the present case when, as the votes already cast clearly show will happen, the Commission approves the application submitted by Professor Størmer.

4. In addition, as Secretary, I take this opportunity to direct that the Invalid Original Spelling *Xiphisura* Brünnich, 1771 (*Zool. Fund.* : 184), to which attention was drawn by Mr. Winckworth in his original communication regarding Brünnich's *Fundamenta* (Winckworth, 1945, *Bull. zool. Nomencl.* 1 : 116) be placed on the *Official Index* at the same time as the names referred to in paragraph 3 above.

⁶ The decision here referred to has since been embodied in *Opinion* 260 (1954, *Ops. Decls. int. Comm. zool. Nomencl.* 5 : 265—280).

18. Particulars of the Voting on Voting Paper V.P.(52)40 :

The state of the voting on Voting Paper V.P.(52)40 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following seventeen (17) Commissioners (arranged in the order in which Votes were received):*

Hering ; Riley ; Dymond ; Calman ; Hankó ; Bonnet ;
Vokes ; do Amaral ; Pearson ; Hemming ; Bradley ;
Esaki ; Lemche ; Mertens ; Stoll ; Cabrera ; Boschma ;

(b) *Negative Votes:*

None ;

(c) *Voting Paper not returned, one (1) :*

Jaczewski.

19. Declaration of Result of Vote : On 11th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)40, signed a Certificate that the Votes cast were as set out in paragraph 18 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

20. On 23rd April 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission

in its Vote on Voting Paper V.P.(52)40, and the points supplementary thereto specified in the Minute executed by the Secretary on 31st July 1952 (reproduced paragraph 17 of the present *Opinion*).

21. The following are the original references for the names on *Official Lists* and *Official Indexes* in the Ruling given in the present *Opinion*:—

- polyphemus*, *Monoculus*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 634
Xiphisura Brünnich, 1771, *Zool. Fund.* : 184
Xiphosura Gronovius, 1764, *Zoophylac. gronov.* **2** : 220
Xiphosura Brünnich, 1771, *Zool. Fund.* : 208
Xiphosura Scopoli, 1777, *Introd. Hist. nat.* : 405
Xiphosura Meuschen, 1778, *Mus. gronov.* : 83

22. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

23. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

24. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

25. The present *Opinion* shall be known as *Opinion* Three Hundred and Twenty (320) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Third day of April, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref.

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

VOLUME 9. Part 11. Pp. 171—184

OPINION 321

Addition to the *Official List of Specific Names in Zoology* of the specific name *striatoradiatus* Leske, 1778, as published in the combination *Spatangus striato-radiatus*, the oldest available name for the fossil Echinoderm from the Limburg Cretaceous (Maestrichtian) commonly known as the *Spatangue de Maestricht* (Class Echinoidea)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 321

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History),
Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

SEÑOR DR. ANGEL CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

MR. FRANCIS HEMMING (*London, England*) (*Secretary*) (27th July 1948).

DR. JOSEPH PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

DR. HENNING LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 321

ADDITION TO THE "OFFICIAL LIST OF SPECIFIC NAMES IN ZOOLOGY" OF THE SPECIFIC NAME "STRIATORADIATUS" LESKE, 1778, AS PUBLISHED IN THE COMBINATION "SPATANGUS STRIATORADIATUS", THE OLDEST AVAILABLE NAME FOR THE FOSSIL ECHINODERM FROM THE LIMBURG CRETACEOUS (MAESTRICHTIAN) COMMONLY KNOWN AS THE "SPATANGUE DE MAESTRICHT" (CLASS ECHINOIDEA)

RULING :—(1) The under-mentioned specific name is hereby placed on the *Official List of Specific Names in Zoology* as Name No. 200 :—*striatoradiatus* Leske, 1778, as published in the combination *Spatangus striato-radiatus* (a senior objective synonym of *radiatus* Gmelin, [1791], as published in the combination *Echinus radiatus*, the name of the type species of *Hemipneustes* Agassiz (J.L.R.), 1836).

(2) The under-mentioned invalid or reputed but non-existent specific names are hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Names Nos. 104 and 105 respectively :—(a) *radiatus* Gmelin, [1791], as published in the combination *Echinus radiatus* (a junior objective synonym of *striatoradiatus* Leske, 1778, as published in the combination *Spatangus striato-radiatus*) ; (b) *scutatus* Knorr, 1768, in the combination *Echinocerus scutatus* (a reputed but non-existent name).

(3) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* as

Name No. 766 : *Hemipneustes* Agassiz (J.L.R.), 1836 (gender : feminine) (type species, by monotypy : *Echinus radiatus* Gmelin, [1791]) (a nominal species, the specific name of which is a junior objective synonym of *striato-radiatus* Leske, 1778, as published in the combination *Spatangus striato-radiatus*).

(4) The under-mentioned reputed but non-existent generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Names Nos. 182 to 184 respectively :—(a) *Spatagoidea* Klein, 1778 ; (b) *Spatagoidea* Leske, 1778 ; (c) *Spatangoida* Gmelin, [1791].

I.—THE STATEMENT OF THE CASE

On 8th April 1946 Professor H. Engel (*Zoologisch Museum, Amsterdam, The Netherlands*) submitted a request for a ruling as to the oldest available specific name for the fossil sea urchin of the Limburg Cretaceous (Maestrichtian) commonly known as the “Spatangue de Maestricht”. As explained by Professor Engel in the supplementary note reproduced in paragraph 4 of the present *Opinion*, the form of this application was revised in 1950. The application so revised was as follows :—

On the question of the correct scientific name for the Echinoderm fossil from the Limburg Cretaceous (Maestrichtian) commonly known as the “Spatangue de Maestricht” (Class Echinoidea, Order Spatangoidea)

By H. ENGEL

(*Zoologisch Museum, Amsterdam, The Netherlands*)

1. In a paper entitled “Over de variatie van *Hemipneustes striatoradiatus* (Leske)” published in 1945 (*Verhandl. Geol-Mijnbouwk. Genootsch. Nederland en Kolon.* (Geol. Ser.) **14** : 173—182)

I discussed the status of the name of the common and well known fossil sea-urchin from the Limburg Cretaceous (Maestrichtian) so aptly designated by the French as "Spatangue de Maestricht". My conclusion was that the modern use by palaeontologists for this species of the generic name *Spatagoïdes* was incorrect under the *Règles*, as also was the use of the specific trivial name *radiatus*. The first name published for this species was *Spatangus striatoradiatus* Leske, 1778; the oldest generic name available for this species according to current taxonomic ideas was *Hemipneustes* Agassiz, 1836; the correct name for this species was therefore *Hemipneustes striatoradiatus* (Leske, 1778).

2. The generic name *Hemipneustes* Agassiz, 1836, was in general use for this species until Lambert & Thiéry (*Essai de Nomenclature raisonnée des Echinides*, (fasc. 6/7) : 411) substituted for it the name *Spatagoïdes* Klein, 1778. Lambert remarks in his "Révision des Echinides fossiles de la Catalogne" (1927, *Mem. Mus. Cienc. nat. Barcelona* (Ser. Geol.) 1 : 42) that the name *Spatagoïdes* was adopted by Bayle as far back as 1878 (*Explic. Carte géol. France* 4 (Atlas)), while he himself had given in 1917 the arguments in favour of the use of this name in place of *Hemipneustes* in his "Note sur quelques Holasteridae" (*Bull. Soc. Sci. hist. nat. Yonne* 70 : 196). The last-mentioned publications are not available to me but the grounds on which Lambert based his conclusions are quite clear from the statements made in the paper which he published in 1924 (*loc. cit.*) jointly with Thiéry. The argument was : (1) that Klein in his *Naturalis Dispositio Echinodermatum* published in 1734 used (: 35) the generic name *Spatagoïdes* for a species which he called *Spatagoïdes andersonii* and which he figured on his plate XXV from a specimen of the "Spatangue de Maestricht" from Bemelen near Maestricht collected in 1715; (2) that Leske in 1778 conferred availability as from that date on Klein's names by republishing that author's *Naturalis Dispositio*. It is quite clear that in this new edition Leske did not reinforce Klein's names "by adoption and acceptance" (*Opinion* 5) and therefore that the republication of these names in this way did not confer any availability on them under the *Règles*; I do not consider it necessary to argue this point in detail, for it was fully considered by the International Commission on Zoological Nomenclature in 1948 in connection with the generic name *Arachnoïdes*, another of Klein's 1734 names which it was desired to make available as from Leske, 1778. The Commission then took the view that, in order to secure this end, it was necessary for it to use its Plenary Powers expressly to validate the name *Arachnoïdes*, its publication in 1778 in Leske's reprint of Klein's work having conferred no availability upon it (1950, *Bull. zool. Nomencl.* 4 : 530—536).

3. The position is therefore that, under the *Règles* the name *Spatagoïdes*, originally of Klein, 1734, acquired no availability in virtue of the republication by Leske in 1778 of Klein's *Naturalis*

Dispositio. Among the synonyms quoted by Lambert & Thiéry (1924 : 411) is the alleged generic name *Spatangoida* attributed by those authors to Gmelin, [1791] (*in* Linnaeus, *Syst. Nat.* (ed. 13) **1** (6) : 3197) ; but this term was used by Gmelin only to indicate that it had been employed by Klein for the group of species dealt with on page 3197. This term was not “reinforced” by Gmelin “by adoption or acceptance” (*Opinion* 5) and accordingly acquired no availability by reason of having been republished in this way. It therefore has no existence as a generic name. The next name to be considered is *Hemipneustes* Agassiz, 1836 (*Mém. Soc. Sci. nat. Neuchatel* **1** : 183) ; this is a validly published name, the nominal genus so named having, as its type species by monotypy, the nominal species *Hemipneustes radiatus* ; this name was not published by Agassiz as a new name but was attributed by him to Lamarck, by whom the trivial name *radiatus* had been employed in the binominal combination *Spatangus radiatus* (1816, *Anim. sans Vertèbr.* **3** : 33). When however we turn to Lamarck, we find that he in turn was not the author of the trivial name *radiatus*, which he attributed to Gmelin, by whom it was published in the binominal combination *Echinus radiatus* (Gmelin, [1791], *in* Linnaeus, *Syst. Nat.* (ed. 13) **1** (6) : 3174). Finally, we find that Gmelin himself did not regard the trivial name *radiatus* as a new name but merely as an emendation of the name *striatoradiatus* as published by Leske in 1778 in the binominal combination *Spatangus striatoradiatus* (Leske, 1778, *Addit. Klein. nat. Disp. Ech.* : 234) (also on page 170 in the edition which does not include the reprint of Klein). The species so named by Leske, and therefore also the species referred to by Agassiz in 1836 under the name *Hemipneustes radiatus*, is the “Spatangue de Maestricht”. As the foregoing was the sole species referred to by Agassiz to the genus *Hemipneustes*, it is the type species of that genus by monotypy. The generic name *Hemipneustes* Agassiz, 1836, is the oldest available generic name for the “Spatangue de Maestricht”, for that species is not congeneric with the species which is the type species of the genus *Echinus* Linnaeus, 1758, to which it was referred by Gmelin in 1791, while the International Commission has, under its Plenary Powers, suppressed all uses of the generic name *Spatangus* prior to Gray, 1825, in order to validate the name *Spatangus* Gray, 1825, with type species *Spatangus purpureus* Müller (O.F.), 1776, a species not congeneric with the “Spatangue de Maestricht” (1950, *Bull. zool. Nomencl.* **4** : 522—530). We arrive therefore at the conclusion that, on the basis of current taxonomic ideas, the correct generic name for the species under consideration is *Hemipneustes* Agassiz, 1836.

4. As regards the trivial name applicable to this species, we have already seen that in 1778 Leske gave it the name *striatoradiatus*, in the binominal combination *Spatangus striatoradiatus*, and that in 1791 Gmelin, who referred this species to the genus *Echinus* Linnaeus, emended the trivial name given to this species by Leske by shortening it to the form *radiatus*. Goldfuss (G. A.) (1829, *Petref. German.*

1 (2) : 150) cites a number of authors under the name *Spatangus radiatus*, but of the references so given one only is prior to the publication in 1778 of the name *Spatangus striatoradiatus*. This reference was cited by Goldfuss as "Knorr, Petref. tab. E IV n. 41". This is clearly a reference to the work entitled "Die Naturgeschichte der Versteinerungen zur Erläuterung der Knorr'schen Sammlung von Merkwürdigkeiten der Natur" by Walch, J. E. I. In volume 2 of the above work there is a description on page 182 of the specimen figured on Plate E IV figs. 1 and 2, but neither on the plate where the number 41 (cited by Goldfuss) refers to four figures (figs. 1—4, of which only figs. 1 and 2 represent the "Spatangue de Maestricht") nor in the text (on page 182) nor on page 28 of Part IV (where a *Systema* is given) is there any trace of the name *Echinocerus scutatus*, alleged by Goldfuss to have been used by "Knorr", i.e., by Walch, for the species under consideration. On the contrary, the specimen figured as figs. 1 and 2 on pl. E IV, which was collected in Maestricht, was cited by Walch under the name *Spatangus*. The only name cited by Walch (but not accepted by him) is from Klein: "*Spatagoides quaternis radiis, andersonii*". We see therefore that Leske was the first author to apply a trivial name to the "Spatangue de Maestricht".

5. In the light of the data given above, we find that the oldest available name for the foregoing species is *Spatangus striatoradiatus* Leske, 1778, that the oldest available generic name for this species is, according to current taxonomic ideas, the name *Hemipneustes* Agassiz, 1836, and therefore that, on the basis of those taxonomic ideas, the correct name, under the *Règles*, for this species is *Hemipneustes striatoradiatus* (Leske, 1778). In view of the misunderstanding and confusion in this matter created by the action by Lambert & Thiéry, it is desirable that these names should now be stabilised by being placed on the *Official Lists* established respectively for generic names and for specific trivial names. The request which I accordingly submit is that the International Commission on Zoological Nomenclature should:—

- (1) place on the *Official List of Generic Names in Zoology* the generic name *Hemipneustes* Agassiz, 1836 (gender of generic name: feminine) (type species, by monotypy: *Echinus radiatus* Gmelin, [1791]);
- (2) place on the *Official Index of Rejected and Invalid Generic Names in Zoology* the under-mentioned reputed but non-existent generic names:—
 - (a) *Spatagoides* Klein, 1778, *Nat. Disp. Ech.* (Leske's ed.): 234
 - (b) *Spatagoides* Leske, 1778, *Add. Klein, Nat. Disp. Ech.*: 9, 156, 175, 176;

(c) *Spatangoida* Gmelin, [1791], in Linnaeus, *Syst. Nat.* (ed. 13) 1 (6) : 3197 ;

(3) place on the *Official List of Specific Trivial Names in Zoology* the trivial name *striatoradiatus* Leske, 1778, as published in the binominal combination *Spatangus striatoradiatus* ;

(4) place on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology* the under-mentioned invalid or reputed but non-existent specific trivial names :—

(a) *radiatus* Gmelin, [1791], as published in the binominal combination *Echinus radiatus* (an invalid name, being an invalid emendation of the trivial name *striatoradiatus* Leske, 1778, as published in the binominal combination *Spatangus striatoradiatus*) ;

(b) *scutatus* Knorr, 1768, in the binominal combination *Echinocerus scutatus* (a reputed but non-existent name).

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On receipt of Professor Engel's application in 1946 the problem of the oldest available specific name for the "Spatangue de Maestricht" was allotted the Registered Number Z.N.(S.) 219.

3. Postponement of consideration of the present application in Paris in 1948 : It had been hoped that it would be possible for the International Commission to reach a decision on this application during its Session in Paris in 1948, and arrangements were made for its submission to the Commission at that Session. The time available in Paris was, however, so short and so much of it was devoted to considering proposals for the amendment, clarification and amplification of the *Règles* that it proved impossible for the Commission to deal with all the applications relating to individual names that were then awaiting attention. The present was one of the applications which for this reason it was impossible to lay before the Commission at that Session.

4. Revision of the present application in 1950 : Certain of the decisions taken by the Thirteenth International Congress of Zoology, 1948, automatically called for a few minor adjustments in all applications which had been submitted to the Commission before that Congress and which were still outstanding. For this reason the present application was revised by Professor Engel in 1950 (the year in which the Official Record of the Paris decisions was published). To the application so revised, which is reproduced in the opening paragraph of the present *Opinion*, Professor Engel added (on 9th September 1950) the following explanatory postscript :—

Postscript (dated 9th September 1950) : The present application was originally submitted in April 1946 at a time when the Commission had not given any ruling on the availability of generic names originally published by Klein in 1734 on their being republished in 1778 in Leske's post-1757 edition of Klein's *Naturalis Dispositio Echinodermatum*. In the application, as then submitted, I accordingly set out in detail the grounds on which I asked the Commission to give a ruling that in the foregoing re-issue of Klein's work Leske had not complied with the requirements specified in *Opinion 5* and therefore that Klein's names acquired no availability in virtue of being so republished by Leske. I have since revised this application, in view of the fact that this question was the subject of a ruling (in the case of the alleged name *Arachnoides* Klein or Leske, 1778) by the Commission at its Session held in Paris in 1948. At the same time I have redrafted the form of the application submitted to the Commission, in order to take account of the decisions taken by the Thirteenth International Congress of Zoology to establish both an *Official List of Specific Trivial Names in Zoology* and also an *Official Index of Rejected and Invalid Generic Names* and a corresponding *Official Index* for similar specific trivial names.

5. Publication of the present application : The present application, as revised by Professor Engel (paragraph 1 above), with the Postscript of 9th September 1950 (reproduced in paragraph 4 above), was sent to the printer in May 1951 and was published in Part 1 of volume 6 of the *Bulletin of Zoological Nomenclature* on 28th September of that year (Engel, 1951, *Bull. zool. Nomencl.* 6 : 3—6).

6. Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America : In the following letter dated 6th February 1952 (received 9th April 1952) Professor

G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America, reported that the present application had received the support of the Committee by seven votes to one vote. As the present application does not involve the use of the Commission's Plenary Powers, the problem to be considered in this case is solely one of the application of the normal provisions of the *Règles* and it was not stated in the letter given below on what ground the dissentient member of the Committee considered that the proposition submitted in this case was defective.

The Joint Committee on Zoological Nomenclature for Paleontology in American has considered this subject, and I wish to inform you that, being polled, they voted: To support the petition (seven):— (1) A. Myra Keen; (2) Katherine V. W. Palmer; (3) Bob Schaeffer; (4) John B. Reeside, Jr.; (5) J. Marvin Weller; (6) Bryan Patterson; (7) G. Winston Sinclair. To oppose the petition (one):—Don L. Frizzell.

In so voting several of the members of the Committee (and other members who did not wish to vote) commented on the doubtful necessity for this petition.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

7. Issue of Voting Paper V.P.(52)41: On 15th May 1952, a Voting Paper (V.P.(52)41) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the name for the Echinoderm fossil from the Limburg Cretaceous known popularly as the "Spatangue de Maestricht", as set out in Points (1) to (4) at the foot of page 5 and at the top of page 6 of volume 6 of the *Bulletin of Zoological Nomenclature*" [*i.e.*, in paragraph 5 of the application reproduced in the first paragraph of the present *Opinion*].

8. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 15th August 1952.

9. Particulars of the Voting on Voting Paper V.P.(52)41 : The state of the voting on Voting Paper V.P.(52)41 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Calman ; Dymond ; Hankó ; Bonnet ; Vokes ;
do Amaral ; Pearson ; Bradley ; Hemming ; Esaki ;
Riley ; Lemche ; Cabrera ; Stoll ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned, two (2) :*

Jaczewski ; Mertens.

10. Declaration of Result of Vote : On 16th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)41, signed a Certificate that the Votes cast were as set out in paragraph 9 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

11. On 24th April 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)41.

12. The following are the original references for the names placed on *Official Lists* and *Official Indexes* in the Ruling given in the present *Opinion* :—

- Hemipneustes* Agassiz (J.L.R.), 1836, *Mém. Soc. Sci. nat. Neuchâtel* **1** : 183—184
radiatus, *Echinus*, Gmelin, [1791], in Linnaeus, *Syst. Nat.* (ed. 13) **1** (6) : 3174
scutatus, *Echinocerus*, Knorr, 1768, in Walch, *Naturgesch. Versteinerung. z. Erläuterung. Knorr. Samml.* **2** : 182, pl. E. IV. figs. 1, 2
Spatagoides Klein, 1778, *Nat. Disp. Ech.* (Leske's Ed.) : 234
Spatagoides Leske, 1778, in Klein, *Nat. Disp. Ech.* (new Ed.) : 234
Spatangoida Gmelin, [1791], in Linnaeus, *Syst. Nat.* (ed. 13) **1** (6) : 3197
striatoradiatus, *Spatangus*, Leske, 1778, *Addit. Klein. nat. Disp. Ech.* : 170 (also in the alternative edition, including the reprint of Klein, *i.e.*, Leske, 1778, in Klein, *Nat. Disp. Ech.* : 234)

13. The nominal genus *Hemipneustes* Agassiz (J.L.R.), 1836, is not the type genus of a family-group taxon and accordingly no question arises in the present case of placing any name on the *Official List of Family-Group Names in Zoology*.

14. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were

made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

15. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

16. The present *Opinion* shall be known as *Opinion Three Hundred and Twenty-One* (321) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Fourth day of April, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 13. Pp. 185—208

OPINION 322

Validation, under the Plenary Powers, of the generic name *Fulgora* Linnaeus, 1767 (Class Insecta, Order Hemiptera) and designation for the genus so named of a type species in harmony with current nomenclatorial practice



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 322

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948)

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 322

VALIDATION, UNDER THE PLENARY POWERS, OF THE GENERIC NAME "FULGORA" LINNAEUS, 1767 (CLASS INSECTA, ORDER HEMIPTERA) AND DESIGNATION FOR THE GENUS SO NAMED OF A TYPE SPECIES IN HARMONY WITH CURRENT NOMEN- CLATORIAL PRACTICE

RULING :—(1) Under the Plenary Powers, (a) the generic name *Laternaria* Linnaeus, 1764, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy ; (b) all type selections for the nominal genus *Fulgora* Linnaeus, 1767 (Class Insecta, Order Hemiptera) made prior to the present Ruling are hereby set aside ; (c) the nominal species *Cicada laternaria* Linnaeus, 1758, is hereby designated as the type species of the genus *Fulgora* Linnaeus, 1767.

(2) It is hereby declared that the alleged generic name *Noctiluca* Houttuyn, 1766, is a cheironym.

(3) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* as Names Nos. 767 and 768 respectively :—(a) *Fulgora* Linnaeus, 1767 (gender : feminine) (type species, by designation, under the Plenary Powers, under (1)(c) above : *Cicada laternaria* Linnaeus, 1758) ; (b) *Dictyophara* Germar, 1833 (gender : feminine) (type species, by selection by Desmarest (1845) : *Fulgora europaea* Linnaeus, 1767).

(4) The under-mentioned generic names and alleged generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Names Nos. 185 to 187 respectively :—(a) *Laternaria* Linnaeus, 1764 (as suppressed, under the Plenary Powers, under

(1)(a) above); (b) *Noctiluca* Houttuyn, 1766 (declared, under (2) above, to be a cheironym); (c) *Dictyophora* Burmeister, 1835 (an Invalid Emendation of *Dictyophara* Germar, 1833).

(5) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Names Nos. 201 and 202 respectively:—(a) *laternaria* Linnaeus, 1758, as published in the combination *Cicada laternaria* (specific name of type species, by designation, under the Plenary Powers, under (1)(c) above, of *Fulgora* Linnaeus, 1767); (b) *europaea* Linnaeus, 1767, as published in the combination *Fulgora europaea* (specific name of type species of *Dictyophara* Germar, 1833).

I.—THE STATEMENT OF THE CASE

On 10th August 1944 a preliminary communication regarding the relative status of the generic names *Laternaria* Linnaeus, 1764, and *Fulgora* Linnaeus, 1767 (Class Insecta, Order Hemiptera) was received from Mr. R. G. Fennah (*Imperial College of Tropical Agriculture, Trinidad*). Correspondence between the applicant, the Secretary and Dr. W. E. China (*British Museum (Natural History), London*) led to the submission by Mr. Fennah on 8th November 1944 of a formal application to the Commission in regard to the foregoing names. For the reasons explained in paragraph 5 below, the form of this application was later somewhat revised. The application so revised was as follows:—

Proposed use of the Plenary Powers to designate a type species for the genus "Fulgora" Linnaeus, 1767, and to suppress the generic name "Laternaria" Linnaeus, 1764 (Class Insecta, Order Hemiptera)

By R. G. FENNAH

(*Imperial College of Tropical Agriculture, Trinidad*)

The object of the present application is to secure a legal foundation for the use of the generic name *Fulgora* Linnaeus, 1767, in its currently

accepted sense. Two distinct problems are involved ; these are dealt with separately as Cases 1 and 2 respectively.

Case 1

2. *Aim of present application:* The aim of the present application is to secure that the type species of *Fulgora* Linnaeus, 1767, shall be *Cicada laternaria* Linnaeus, 1758. The relevant references are :—

- (a) The generic name *Fulgora* Linnaeus was first published in 1767, *Syst. Nat.* (ed. 12) **1** (2) : 703, no. 1.
- (b) Claims have been advanced on behalf of each of the following authors to be regarded as the author by whom the type species of *Fulgora* Linnaeus was first either designated or selected :—
 - (i) Linnaeus, 1767, *Syst. Nat.* (ed. 12) **1** (2) : 703 : type species designated under Rule (f) in Article 30 : *Cicada laternaria* Linnaeus, 1758 ; *Syst. Nat.* (ed. 10) **1** : 434, no. 1 ;
 - (ii) Sulzer, 1776, *Dr. Sulzers abgek. Gesch. Ins.* : 85, Tab. 9, fig. 5 : type species selected under Rule (g) in Article 30 : *Fulgora europaea* Linnaeus, 1767, *Syst. Nat.* (ed. 12) **1** (2) : 704, no. 9 ;
 - (iii) Latreille, 1810, *Consid. gén. Anim. Crust. Arach. Ins.* : 434 : type species selected under Rule (g) in Article 30, as interpreted by *Opinions* 11 and 136 : *Fulgora europaea* Fabricius, 1775, *Syst. Ent.* : 674 (= *Fulgora europaea* Linnaeus, 1767).

3. *Discussion of the case:* The generic name *Fulgora* was published with a description but with no type designation. The following nine nominal species were placed in this genus : *laternaria*; *diadema*; *candelaria*; *phosphorea*; *noctivida*; *lucernaria*; *flammea*; *truncata*; *europaea*. Two of these species, namely *F. laternaria* and *F. candelaria*, by evidence of identical description and references, belong to the genus *Laternaria* Linnaeus, 1764 (*Mus. Lud. Ulr.* : 152), and were the only two species included in that genus. The former is the type species of *Laternaria* by absolute tautonymy.

4. The relation of the name *Fulgora* Linnaeus, 1767, to *Laternaria* Linnaeus, 1764, must be either that of a *nomen novum* for a supposedly invalid name, *Laternaria*, or a simple substitution, as it cannot be a restriction of *Laternaria*, since it includes all the species originally placed in that genus. In his treatment of *Cicada* in 1764 (which there follows immediately after the genus *Laternaria*), Linnaeus did not include a single one of the species which three years later he listed under the generic name *Fulgora*. It is clear that what Linnaeus had decided upon and what he attempted to do with the limited material available to him in 1764 and with the fuller material available in 1776,

was to erect a genus to contain the species which in 1758 he had placed in the section "Noctilucae" (*capite antice protracta in vesicam oblongam*) of the genus *Cicada*. It was merely an accident that in 1764 he did not have before him all the species which he had originally included in the "Noctilucae", namely *C. laternaria*, *C. candelaria*, *C. phosphorea*, *C. noctivida*, and *C. lucernaria*, the only two then at his disposal being the first two.

5. The generic name *Laternaria* was published without a description, but two nominal species were included in it, of which the first is the type species by absolute tautonymy. This generic name accordingly satisfies the requirements of Article 25 and is an available name.¹ The name *Fulgora* cannot therefore be interpreted as a *nomen novum* for an unavailable name. It must accordingly be regarded as a substitute name for *Laternaria*, and, as it was published without a type designation, it may be argued that, by application of Rule (f) in Article 30, the genus *Fulgora* takes, as its type species, the type species of the genus which it replaces, namely *Cicada laternaria* Linnaeus, 1758.

6. If the foregoing contention is not upheld, it becomes necessary to examine the argument advanced by Kirkaldy in 1913 (*Bull. Hawaii. Sug. Ass. (Ent. Ser.)* 12 : 11) that Sulzer (1776) selected *Fulgora europaea* Linnaeus as the type species of the genus *Fulgora* by publishing an unambiguous figure of that species (pl. 9, fig. 5) with the following statement (: 85) :—

Wir haben in unserer Tafel die Kegelstirn nicht gewählt, als wenn sie dem Leser den vollständigsten und richtigsten Begriff von diesem Geschlechte geben könnte, sondern weil sie noch nirgends abgebildet worden, und gleichwohl nicht nur eine Europäerin, sondern wol gar eine Schweizerin ist; wenn man aber beliebt Rösel's vortreffliche Abbildungen des grossen Laterenträgers und des Kleinern, der sich in Kennzeichen Tab. X fig. 62a befindet, mit dieser Beschreibung zusammen zu halten, so wird man eine genugsame Kenntniss davon erlangen. Linne beschreibt 9 Arten.*

* The following is a translation of the passage quoted from Sulzer (1776) :— For our plate we have not selected the Cone-Face as giving the reader the most complete and most correct idea of this genus, but a species which, although nowhere hitherto figured, is not only a European, but even a Swiss insect; but, if the reader wishes to compare Rösel's striking illustration of the large Lanternbearer which appears on plate 10, fig. 62a with this description, he will gain an adequate idea therefrom. Linnaeus described nine species.

¹ As the names of previously established nominal species were cited in connection with the generic name *Laternaria* Linnaeus, that name, notwithstanding the fact that it was published with no diagnosis for the genus so named, would, under the liberalisation of Article 25 adopted by the Paris (1948) Congress (1950, *Bull. zool. Nomencl.* 4 : 80), have been an available name, even if no type species had been designated or indicated for the genus so named.

7. It is considered that the foregoing action by Sulzer closely resembles the statement made by Lamarck in 1801 (*Syst. Anim. sans Vertèbres*) regarding the purpose of citing representative species for the genera which he was then discussing. Accordingly, under the precedent set by the rejection of Lamarck's action as constituting selections of type species by the ruling given by the International Commission on Zoological Nomenclature in its *Opinion 79*, Sulzer's action in the present case must be rejected as insufficient to constitute a type selection for the genus *Fulgora*, under Rule (g) in Article 30.

8. We have now to consider the action taken by Latreille in 1810 (*Consid. gén. Anim. Crust. Arach. Ins.* : 434), where he cited "*Fulgora europaea* Fab." as the type species of "Fulgore," which earlier (: 262) in the same work he had defined under both the French and Latin forms of this generic name ("Fulgore" and *Fulgora*). The species so cited by Latreille, by description, by bibliographic citation and by geographical distribution is unquestionably *Fulgora europaea* Linnaeus, 1767. Latreille's action in the *Consid. gén.* has been ruled by the International Commission on Zoological Nomenclature as constituting rigorous selections of type species for the genera there dealt with (*Opinions 11 and 136*) and accordingly his selection of *Fulgora europaea* Linnaeus as the type species of *Fulgora* Linnaeus must be accepted as complying with the Rules, if it is held that no type species had been designated or validly selected for that genus prior to Latreille's action in 1810.

9. It is urged however that, quite irrespective of the merits of the claims advanced on behalf of the foregoing authors to have designated or selected a type species for the genus *Fulgora* Linnaeus, there is strong historical reason for conserving this generic name for the species (*Cicada laternaria* Linnaeus) which Linnaeus considered to be luminous. By the use of such terms as *laternaria* (which he thought sufficiently striking to adopt from Merian), *phosphorea* and *Fulgora*, by the note which he inserted in the description regarding the alleged nocturnal luminosity of this species, and by the first place which he consistently gave to this species in all his writings on Homoptera, Linnaeus clearly revealed that his conception (1) of the Section "Noctilucae" of the genus *Cicada*, (2) of the genus *Laternaria*, and (3) of the genus *Fulgora* was based upon this insect and extended to other species, in so far only as they possessed what he supposed to be the essential organ of luminosity, a cephalic process.

10. *Action by the International Commission on Zoological Nomenclature desired:* The International Commission on Zoological Nomenclature is asked, either, if it thinks it proper, to declare that *Cicada laternaria* Linnaeus, 1758, is the type species of the genus *Fulgora* Linnaeus, 1767, under Rule (f) in Article 30, or, if it does not consider this to be the case, to use its Plenary Powers to designate the foregoing species as the type species of this genus.

Case 2

11. *Aim of present application*: The aim of the present application is to secure the suppression under the Plenary Powers of the generic name *Laternaria* Linnaeus, 1764, in favour of the name *Fulgora* Linnaeus, 1767.

12. *Discussion of the case*: With the exception of Kirkaldy and Haupt, who based their classification upon the belief that *Fulgora europaea* Linnaeus, 1767, was the type species of the genus *Fulgora* Linnaeus, 1767, students of Homoptera have universally employed the generic name *Fulgora* for 184 years as the generic name either of the Neotropical species *Cicada laternaria* Linnaeus, 1758, or of the Oriental species *Cicada candelaria* Linnaeus, 1758. Further, the generic name *Fulgora* formed the basis of the first group names to be adopted (namely Fulgorellae Latreille, 1807 ; Fulgoridae Leach, 1817 ; Fulgorina Burmeister, 1835 ; Fulgorelles, Fulgorites and Fulgoroides Spinola, 1839) and their later modifications.

13. Scrutiny of the type designations and type selections made for the genera *Laternaria* Linnaeus, 1764, and *Fulgora* Linnaeus, 1767, strongly suggests that these genera have the same species, *Cicada laternaria* Linnaeus, 1767, as their respective type species and almost the universal practice of students of this group has been to treat as the type species of *Fulgora* the above species which certainly is the type species of *Laternaria*.

14. It is considered that in this case the application of the Law of Priority, which was designed to stabilise nomenclature, would have the opposite effect. It would lead to the suppression, as a synonym, of one of the earliest and best known generic names in zoology (*Fulgora* Linnaeus, 1767) and with it the series of supergeneric terms founded upon it, and would leave in its stead a name (*Laternaria* Linnaeus, 1764) which only students of the Hemiptera are likely to recognise and which only two or three have used as the basis of the name for a supergeneric unit. The name *Fulgora* Linnaeus presents a clear case of a name which should be preserved for the sake of avoiding confusion.

15. *Action by the International Commission on Zoological Nomenclature desired*: The International Commission on Zoological Nomenclature are asked (1) to use its Plenary Powers (a) to suppress the generic name *Laternaria* Linnaeus, 1764, and (b) to validate the generic name *Fulgora* Linnaeus, 1767, and (2) to place the latter generic name (with *Cicada laternaria* Linnaeus, 1758, as type species) on the *Official List of Generic Names in Zoology*.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Mr. Fennah's application, the question of the relative status of the generic names *Laternaria* Linnaeus, 1764, and *Fulgora* Linnaeus, 1767, was allotted the Registered Number Z.N.(S) 162.

3. Issue of Public Notices in 1947 : On 20th November 1947 Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given in the manner prescribed by the Ninth International Congress of Zoology, Monaco, 1913. The issue of these Notices elicited no objection to the action proposed.

4. Postponement of consideration of the present application in Paris in 1948 : In view of the fact that a question of the interpretation of Article 30 was bound up in the present case, it was judged better at Paris in 1948 to defer action on the present application until it would be possible to put forward definite proposals for the amendment or interpretation of the foregoing Article simultaneously with the taking of a decision by the Commission in regard to the two names involved in Mr. Fennah's application.

5. Revision of Mr. Fennah's application in 1951 : A number of the decisions taken by the Thirteenth International Congress of Zoology, Paris, 1948, affected the form and scope of *Opinions* to be rendered in future by the Commission, and to this extent necessitated a partial revision of all applications which had been submitted prior to the Paris Congress and which were at that date still outstanding. The necessary revision of the present application was carried out in May 1951.

6. Separate submission of a request for a "Declaration" clarifying the meaning of Rule (f) in Article 30 of the "Règles" : Under a decision taken by the Thirteenth International Congress of Zoology, Paris, 1948, the International Commission was instructed in future to restrict *Opinions* to Rulings given on questions relating to individual names and to individual books and to include in the "*Declarations*" Series any decision which it might take of a general character affecting the interpretation

of the *Règles* and therefore of direct concern to the general body of zoologists. In pursuance of the foregoing directions, Mr. Hemming, as Secretary, prepared in 1951 the following papers for submission to the Commission: (1) an application for the adoption of a *Declaration* clarifying Rule (f) in Article 30 (the Rule relating to the determination of the type species of a nominal genus established as a substitute for a previously established nominal genus, the name of which is, or is believed to be, invalid); (2) a Report on the remaining issues calling for decision in the light of Mr. Fennah's application regarding the generic names *Laternaria* Linnaeus and *Fulgora* Linnaeus. The first of these papers has been reproduced in *Declaration* 14, the *Declaration* in which the Commission gave a Ruling on the question of interpretation referred to above.²

7. Issues arising in the present case after the removal therefrom of the problem of the interpretation of Rule (f) in Article 30: The second of the two documents referred to above, namely the Report by the Secretary on the issues arising in the present case after the removal therefrom of the problem of the interpretation of Rule (f) in Article 30, was as follows:—

Report on the proposal that the generic name "Fulgora" Linnaeus 1767 (Class Insecta, Order Hemiptera) should be validated under the Plenary Powers

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

Mr. R. C. Fennah has asked the International Commission on Zoological Nomenclature to use its Plenary Powers to validate the generic name *Fulgora* Linnaeus, 1767 (Class Insecta, Order Hemiptera) and thus to avoid the serious confusion which would be likely to arise if that name were to be discarded in favour of the virtually unknown name *Laternaria* Linnaeus, 1764. Mr. Fennah first wrote to the Commission on this subject in August 1944. After expressing the belief that, under the *Règles*, *Fulgora* Linnaeus, 1767, was an objective synonym of *Laternaria* Linnaeus, 1764, the two genera having the same species as their respective type species, Mr. Fennah then pointed out that the question at issue involved not only the status of the generic name *Fulgora* itself, for within the previous 137 years a large number

² For the text of *Declaration* 14 see pp. xiii—xxiv of the present volume.

of terms had been applied to units of higher taxonomic rank based upon the word "Fulgora". In this connection he cited the terms: Fulgorellae, Fulgorida, Fulgorides, Fulgorelles, Fulgorina, Fulgoriens, Fulgoritae, Fulgoridea and Fulgoridae. Mr. Fennah continued as follows:—"In the interests of nomenclatorial stability I consider that the group names based on *Fulgora* Linnaeus should be preserved, on either or both of the following grounds: (1) The group name based on *Fulgora* has been universally employed for 137 years, and should be conserved on the basis of long usage; (2) The group name based on *Fulgora* is the oldest supergeneric name, based on a valid genus, and therefore should take priority over any other existing or potential supergeneric name." In the foregoing communication Mr. Fennah did not formulate concrete proposals for securing the object which he had in view, but not long afterwards, following upon a correspondence between Mr. Fennah, Dr. W. E. China (*British Museum (Natural History)*) (with whom Mr. Fennah had been in communication before he approached the Commission on this case) and myself, Mr. Fennah's present application was formally submitted to the Commission. The possible use of the Plenary Powers in the present case was advertised in the prescribed manner in December 1947. No objection of any kind was received in response to this advertisement.

2. The purpose of the present Report is to discuss two matters arising out of Mr. Fennah's application: first to examine in closer detail what is the position under the *Règles*, as regards the type species of the nominal genera *Laternaria* Linnaeus, 1758, and *Fulgora* Linnaeus, 1767; second, to elaborate to such extent as may be necessary, the recommendations submitted regarding the action required, if the Commission decides to approve the stabilisation of the generic name *Fulgora* in its accustomed sense, in order that that action may comply with the decisions taken in Paris in 1948 by the Thirteenth International Congress of Zoology in regard to the manner in which cases of this kind are to be dealt with.

(1) The type species of the nominal genera "Laternaria" Linnaeus, 1764, and "Fulgora" Linnaeus, 1767

3. *The type species of the nominal genus "Laternaria" Linnaeus, 1764:* This nominal genus as originally established by Linnaeus contained two nominal species, namely: (1) *Cicada phosphorea* Linnaeus, 1758; (2) *Cicada candelaria* Linnaeus, 1758. The first of these nominal species is subjectively identified by specialists with the nominal species *Cicada laternaria* Linnaeus, 1758, and, on the basis of this subjective identification, the argument has been advanced that the latter species is automatically the type species of the nominal genus *Laternaria* Linnaeus, 1764, by absolute tautonymy under Rule (d) of Article 30. This particular argument is fallacious, for it assumes that

it is possible for the type species of a genus to be a nominal species not included in the genus concerned at the time when the generic name was first published. Fortunately, however, a closer inspection of the *Museum Ludovicae Ulrica* of Linnaeus shows that at the time when Linnaeus first published the generic name *Laternaria*, he included, in the synonymy of the first of the two nominal species which he then referred to that genus (*Cicada phosphorea* Linnaeus, 1758) the reference "Syst. Nat. 434 No. 1". This reference is to page 434 of the 10th edition of the *Systema Naturae*, where the species bearing the number "1" is *Cicada laternaria* Linnaeus, 1758.

4. Thus, the nominal species *Cicada laternaria* Linnaeus, 1758, was included by Linnaeus in the genus *Laternaria* Linnaeus, 1764, as a synonym of one of the nominal species then recognised by him as belonging to that genus. The point which has next to be considered is whether the inclusion in a specific synonymy of the name of a nominal species constitutes, for the purposes of Article 30, the citation of that nominal species as one of the species originally included in the genus concerned. If the answer to this question is in the affirmative, then in the present case the nominal species *Cicada laternaria* Linnaeus, 1758, is the type species of the genus *Laternaria* Linnaeus, 1764, by absolute tautonymy; if on the other hand, the answer to this question is in the negative, then the above nominal species is not one of the originally included species of the genus *Laternaria*, and, as the subjective identification of *Laternaria phosphorea* (Linnaeus) (= *Cicada phosphorea* Linnaeus, 1758) with *Cicada laternaria* Linnaeus, 1758, by later authors is irrelevant, when considering what is the type species of this genus, it would be necessary in that event to turn to the later literature to find out which of the two originally included species had first been selected as the type species of *Laternaria* by a subsequent author.

5. At the time when Mr. Fennah's application was submitted to the Commission there existed no authoritative ruling on the question discussed above; in consequence, it was not possible to ascertain, without special reference to the International Commission, whether or not *Cicada laternaria* Linnaeus, 1758, was the type species of the genus *Laternaria* Linnaeus, 1764. It was not until July 1948 that the question of principle involved was settled by the Thirteenth International Congress of Zoology, when it defined the species which, for the purposes of Article 30, were to be regarded as the nominal species originally included in any given nominal genus and which alone therefore were eligible to become the type species of that genus. On this question the Congress decided that words should be inserted in the *Règles* "to make it clear that the nominal species to be regarded as having been included in a given nominal genus at the time when the name of that genus was first published are (i) the nominal species cited by the original author as valid taxonomic species belonging to that nominal genus and (ii) any nominal species cited on that occasion as synonyms

of nominal species falling in (i) above, and that the foregoing nominal species are alone eligible for selection as the type species" (see 1950, *Bull. zool. Nomencl.* 4 : 179—180).

6. In the light of the foregoing decision by the Paris Congress, we see at once that *Cicada laternaria* Linnaeus, 1758, is to be regarded as one of the nominal species included in the genus *Laternaria* Linnaeus, 1764, at the time when that generic name was first published. Now that this proposition has been established, it follows automatically, under Rule (d) in Article 30, that *Cicada laternaria* Linnaeus, 1764, is the type species of the nominal genus *Laternaria* Linnaeus, 1764, by absolute tautonymy.

7. *The type species of the nominal genus "Fulgora" Linnaeus, 1767 :* As pointed out by Mr. Fennah, Linnaeus in 1767 included in the new genus *Fulgora* (i) the two nominal species which, three years earlier he had placed in the then newly named genus *Laternaria* Linnaeus, 1764, and (ii) seven other nominal species not mentioned by Linnaeus at the time when he published the generic name *Laternaria*. From a practical point of view Linnaeus may certainly be regarded as having substituted in 1767 the new generic name *Fulgora* for the generic name *Laternaria* which he had first published three years earlier (in 1764). Nor is the reason far to seek : throughout his writings Linnaeus invariably rejected a generic name that was tautonymous with the trivial name of one of the included species. This problem did not, from his point of view, arise in 1764, when he first published the generic name *Laternaria*, for on that occasion he applied the trivial name *phosphorea* Linnaeus, 1758, originally published in the binominal combination *Cicada phosphorea* to the species to which in 1758 he had applied the trivial name *laternaria* Linnaeus, 1758, in the binominal combination *Cicada laternaria*. In 1767, however, Linnaeus decided to discard the name *phosphorea* Linnaeus, 1758, as the trivial name of the species in question and to restore to it the trivial name *laternaria* Linnaeus, 1758. If Linnaeus had taken no other action in 1767, this species would then have had the tautonymous name *Laternaria laternaria* (Linnaeus, 1758). But this would have offended against Linnaeus' rule that tautonymy of this kind was to be barred and it can hardly be doubted that it was to get over this difficulty that he dropped the generic name *Laternaria* Linnaeus, 1764, and applied to the genus in question the new generic name *Fulgora*, the name of the species with which we are here concerned thus becoming *Fulgora laternaria* (Linnaeus, 1758).

8. While the above is, I am convinced, the correct explanation of the action taken by Linnaeus in this matter, we are concerned, from the point of view of nomenclature, not with the reasons which prompted the action taken by Linnaeus but with the nomenclatorial consequences of that action, judged solely by the wording used in the *Règles*. Rule (f) in Article 30 contains a provision that Mr. Fennah has argued is,

and which I myself formerly considered could be held to be, applicable to the present case. This Rule reads: "In case a generic name without originally designated type species is proposed as a substitute for another generic name, with or without type species, the type species of either, when established, becomes *ipso facto* the type species of the other." We are accordingly confronted here, with the need for an interpretation of Rule (f) in Article 30, for, in the absence of such an interpretation, it is impossible to make any progress with the consideration of the question of the type species of the genus *Fulgora* Linnaeus. The Thirteenth International Congress of Zoology at Paris in 1948 decided that, in future, general questions relating to the interpretation of the *Règles* are not to be dealt with by the Commission in *Opinions* relating to individual nomenclatorial problems but are to be considered separately, decisions reached on such matters being recorded in *Declarations* (see 1950, *Bull. zool. Nomencl.* 4 : 136—137). In accordance with the procedure so prescribed, I have prepared a separate application (File Z.N.(S.) 539),³ in which I discuss what appear to me to be the relevant considerations in this matter and arrive at the conclusion, which I there submit for the favourable consideration of the International Commission, that, in order to be brought within the scope of Rule (f) of Article 30, a generic name must have been published with an express intimation that it was put forward as a substitute for some other name. It is necessary, for the purposes of the present application, to make some assumption as to the meaning to be attached to the foregoing Rule, and I have therefore assumed that that Rule has the meaning which, for the reasons explained in application Z.N.(S.) 539, I believe that it has and which I therefore recommend the Commission to endorse.⁴ Naturally, if the Commission were to take a different view, it would be necessary to re-examine the case of the name *Fulgora* Linnaeus in the light of the decision so taken. Meanwhile, the provisional adoption of the foregoing assumption renders it possible to make progress with the present case.

9. The type species of the genus *Fulgora* Linnaeus was not designated or indicated under any of the Rules lettered (a) to (d) in Article 30; nor, on the assumption adopted in paragraph 8 above, was the type species of this genus determined under Rule (f) in Article 30, for, when Linnaeus published the generic name *Fulgora* in 1767, he said nothing to imply that it was a substitute for the earlier name *Laternaria* Linnaeus, 1764. Accordingly (subject to the reserve specified in the preceding paragraph) we reach the conclusion that the type species of the genus *Fulgora* Linnaeus, 1767, can only be determined under

³ See first paragraph of *Declaration* 14, pp. xiii—xxiv of the present volume.

⁴ The assumption here made has since been endorsed by the International Commission in its *Declaration* 14 (see p. xx of the present volume).

the one remaining Rule in Article 30, namely Rule (g) (type species by subsequent selection).

10. When in 1767 he established the nominal genus *Fulgora*, Linnaeus placed in it altogether nine nominal species, namely (1) the five nominal species which in 1758 he had described as belonging to the Section "Noctilucae" of the genus *Cicada*—of which three (*phosphorea*, *laternaria* (then treated as identical with *phosphorea*) and *candelaria*) were in 1764 placed in the genus *Laternaria*—and (2) four nominal species then named for the first time (namely *Fulgora diadema* nov. sp. ; *Fulgora flammea* nov. sp. ; *Fulgora truncata* nov. sp. ; *Fulgora europaea* nov. sp.). Any one of these nominal species is, therefore, eligible to be selected as the type species of the genus *Fulgora* Linnaeus by a later author, acting under Rule (g) in Article 30. It is necessary therefore to examine the literature, to determine which of these nine nominal species was first so selected.

11. The first author on whose behalf a claim has been advanced that he selected a type species for the genus *Fulgora* Linnaeus is Sulzer (1776). This claim, which was advanced first by Kirkaldy in 1913, is examined by Mr. Fennah in the application which he has submitted to the Commission, where the passage in Sulzer relied upon by Kirkaldy is quoted in full. Mr. Fennah concludes that Sulzer's action cannot possibly be regarded as constituting the selection of a type species for the genus *Fulgora* Linnaeus ; I entirely share his view.

12. The next work which has to be considered is Latreille's *Consid. gén. Anim. Crust. Arach. Ins.* of 1810, the entries in which, as noted by Mr. Fennah, have been accepted by the International Commission as constituting selections of type species for the genera there enumerated in every case where one species only was specified by Latreille (*Opinion* 136). On turning to this work, we find that Latreille cited one species only, "*Fulgora europaea* Fab." under the generic name "Fulgore" (French) and *Fulgora* (Latin). Fabricius himself never published the binominal combination *Fulgora europaea* as a new name and there is thus nomenclatorially no such name as *Fulgora europaea* Fabricius. What he did do in 1775 (in the *Systema Entomologiae* : 674) was to cite a nominal species under the binominal combination *Fulgora europaea* which he correctly attributed to Linnaeus. The nominal species *Fulgora europaea* Linnaeus, 1767, is therefore the species which was selected by Latreille as the type species of *Fulgora* Linnaeus, 1767. As that species was (as we know) one of the species originally included by Linnaeus in the genus *Fulgora* and as no type species had been designated, indicated or selected for this genus prior to the action taken by Latreille in 1810, that author's selection of *Fulgora europaea* Linnaeus, 1767, is valid under the *Règles* and that species is therefore the type species of the genus *Fulgora* Linnaeus, 1767.

13. It is important in this connection to note that the nominal species *Fulgora europaea* Linnaeus, 1767, is currently referred to the genus *Dictyophara* Germar, 1833 (*Rev. Ent.* 1(4) : 175), of which indeed it is the type species by subsequent selection by Desmarest (1845) (*in d'Orbigny, Dict. univ. Hist. nat.* (nouv. ed.) 5 : 121). Further as Mr. Fennah has pointed out (*in litt.*, 1945), the above genus is the type genus of a currently recognised family, the DICTYOPHARIDAE. It follows from what has been said in paragraph 12 above that the generic name *Dictyophara* Germar, 1833, is under the *Règles* a junior objective synonym of the generic name *Fulgora* Linnaeus, 1767, each of these nominal genera having the same species as its type species. The confusion likely to follow the loss by the species concerned of so well known a generic name as that of *Fulgora* would naturally be very greatly aggravated if in addition that name remained a valid name but had to be applied to some entirely different genus (in this case, the genus *Dictyophara* Germar). Serious as in any circumstances such consequences would be, they would be very seriously intensified in the present case through the necessity of using the family name FULGORIDAE for the family at present known as the DICTYOPHARIDAE. In this connection, it will be recalled that at the time when the International Congress of Zoology first granted Plenary Powers to the International Commission on Zoological Nomenclature to suspend the operation of the *Règles*, the avoidance of transfers of generic names from one genus to another (as the application of the *Règles* in the present case would require) was specifically cited as one of the purposes for which the Plenary Powers were granted to the Commission.

(II) The reputed generic name “*Noctiluca*” Houttuyn, 1766, in relation to the generic name “*Fulgora*” Linnaeus, 1767

14. In the year 1947 attention was drawn in connection with the present case to a reputed generic name *Noctiluca* Houttuyn, 1766, stated to have been published in 1766 in that author's *Natuurlyke Historie*; this name, it was claimed, had priority over, and should therefore under the *Règles* replace, the generic name *Fulgora* Linnaeus, 1767. In these circumstances it was obvious that this was a matter which must at once be investigated, for it would clearly be pointless to ask the Commission to validate the name *Fulgora* Linnaeus, 1767, as against the name *Laternaria* Linnaeus, 1764, while still leaving *Fulgora* Linnaeus liable to be replaced by the earlier name *Noctiluca* Houttuyn.

15. At Mr. Fennah's request this matter was therefore at once investigated by Dr. W. E. China (*British Museum (Natural History)*), who, on consulting Houttuyn's *Natuurlyke Historie*, found that that author had not employed the term *Noctiluca* as a generic name and had not used it in the nominative singular. What he did was to employ this word in the nominative plural, i.e. as “*Noctilucae*”, “in exactly

the same sense as did Linnaeus in the *Syst. Nat.* of 1758, that is, as a subdivision of *Cicada*". This discovery put an end to all threat to *Fulgora* from this quarter, for already in 1944 the Commission had rendered an *Opinion* (*Opinion* 183) in which it had ruled that, in order to acquire availability as a generic name, a word must not only be a noun substantive, but must also have been published in the nominative singular. This ruling was in 1948 incorporated into the *Règles* by a decision taken by the Thirteenth International Congress of Zoology (see 1950, *Bull. zool. Nomencl.* 4 : 139—140). It will be seen therefore that the alleged generic name *Noctiluca* Houttuyn, 1766, possesses no existence under the *Règles*, being a mere cheironym. As such, it should, like other cheironyms which have given trouble in the past, be put finally to rest by being registered in the *Official Index of Rejected and Invalid Generic Names in Zoology*.

Summary of Conclusions reached on the data available

16. We may now summarise as follows the conclusions which may be drawn from the data available in regard to the present case :—

- (1) The generic name *Laternaria* Linnaeus, 1764, is an available name and the nominal genus in question has *Cicada laternaria* Linnaeus, 1758, as its type species by absolute tautonymy (paragraph 6).
- (2) There is no such generic name as the alleged generic name *Noctiluca* Houttuyn, 1766, which is a mere cheironym (paragraph 15).
- (3) The generic name *Fulgora* Linnaeus, 1767, is an available name and the nominal genus in question has, as its type species, *Fulgora europaea* Linnaeus, 1767, by subsequent selection by Latreille in 1810 (paragraph 12).
- (4) The nominal species *Cicada laternaria* Linnaeus, 1767, is currently referred to the genus *Fulgora* Linnaeus, 1767, the older generic name *Laternaria* Linnaeus, 1764, not being in use. As employed in this sense, the generic name *Fulgora* Linnaeus has formed the basis of the family name FULGORIDAE, which is in universal use (paragraph 1).
- (5) The nominal species *Cicada europaea* Linnaeus, 1767 (the type species, under the *Règles*, of the genus *Fulgora* Linnaeus, 1767) is currently placed in the genus *Dictyophara* Germar, 1833, of which it is the type species. As employed in this sense, the generic name *Dictyophara* Germar has formed the basis of the family name DICTYOPHARIDAE, which, like the family name FULGORIDAE, is now in general use (paragraph 13).

- (6) The strict application of the *Règles* in the present case would thus
 (a) deprive the species universally known as *Fulgora* of the generic name which has been for so long applied to them, and
 (b) involve the confusing transfer of that generic name to the genus now known by the name *Dictyophara* Germar. A further result of the strict application of the *Règles* would be that the family now known by the name FULGORIDAE would need to be known by the name LATERNARIIDAE, while the family name FULGORIDAE would need to be transferred to the family now known by the name DICTYOPHARIDAE.

17. The question which it will, therefore, be necessary for the International Commission on Zoological Nomenclature to consider is whether the undoubted *prima facie* case advanced by Mr. Fennah, with the support of Dr. China, is such that the use of the Plenary Powers would be justified in order to preserve the accustomed use of the generic name *Fulgora* Linnaeus and of the family name FULGORIDAE and to prevent those names from being transferred respectively to the genus now known by the name *Dictyophara* Germar and the family now known as DICTYOPHARIDAE.

18. In the event of the Commission deciding that this is certainly a case where the strict application of the *Règles* would give rise to quite unjustified confusion and therefore that the Plenary Powers should be used in the interests of nomenclatorial stability, the detailed action which the Commission would need to take would be the following :—

(1) use the Plenary Powers :—

- (a) to suppress the generic name *Laternaria* Linnaeus, 1764, for the purposes of the Law of Priority but not for those of the Law of Homonymy ;
- (b) to set aside all selections of type species for the nominal genus *Fulgora* Linnaeus, 1767, made prior to the proposed decision ;
- (c) to designate the nominal species *Cicada laternaria* Linnaeus, 1758, to be the type species of the nominal genus *Fulgora* Linnaeus, 1767 ;

(2) declare the alleged generic name *Noctiluca* Houttuyn, 1766, to be a cheironym ;

(3) place the following generic names on the *Official List of Generic Names in Zoology*, with the type species severally specified below :—

- (a) *Fulgora* Linnaeus, 1767 (gender of generic name : feminine) (type species, as designated under the

Plenary Powers under (1)(c) above : *Cicada laternaria* Linnaeus, 1758) ;

(b) *Dictyophara* Germar, 1833 (gender of generic name : feminine) (type species, by selection by Desmarest (1845) : *Fulgora europaea* Linnaeus, 1767) ;

(4) place the under-mentioned generic names and alleged generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :

(a) the generic name *Laternaria* Linnaeus, 1764, as suppressed under (1)(a) above ;

(b) the alleged generic name *Noctiluca* Houttuyn, 1766, declared to be a cheironym under (2) above ;

(5) place the under-mentioned specific trivial names on the *Official List of Specific Trivial Names in Zoology* :—

(a) *laternaria* Linnaeus, 1758, as published in the binominal combination *Cicada laternaria* ;

(b) *europaea* Linnaeus, 1767, as published in the binominal combination *Fulgora europaea*.

8. Question of the correct spelling of the generic name “ Dictyophara ” Germar, 1833 : At the time when the Report reproduced in the immediately preceding paragraph was completed, the Secretary placed the following Minute (dated 19th May 1951) on the File Z.N.(S.) 162, in regard to the question of the correct spelling of the name *Dictyophara* Germar, 1833, a generic name which it had been necessary to deal with in that Report :—

**Question of the spelling to be adopted for the generic name
“ Dictyophara ”, Germar, 1833**

MINUTE by FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

In preparing my Report to the Commission on the problems associated with the name *Fulgora* Linnaeus, 1767, I have had to include

a proposal that the name *Dictyophara* Germar, 1833, should be placed on the *Official List of Generic Names in Zoology*, this being necessary in order to comply with the directions given to the Commission by the Thirteenth International Congress of Zoology, Paris, 1948, that in future Rulings given in *Opinions* should cover the whole field involved.

2. In preparing this portion of my Report I found that the foregoing generic name had been emended to *Dictyophora* on linguistic grounds by Burmeister in 1835 (*Handb. Ent.* 2 (1) : 159). I accordingly consulted Dr. W. E. China (*British Museum (Natural History), London*). In the enclosure to a letter dated 11th September 1950, Dr. China expressed the opinion that “*Dictyophora* is an unnecessary emendation by Burmeister”. In a further letter dated 20th September 1950, Dr. China wrote as follows : “*Dictyophara* versus *Dictyophora* : In the history of this genus the spelling ‘-phara’ has been used by seventy-nine authors, whereas the spelling ‘-phora’ has been used by only forty-three authors. In the principal monograph of the family by Melichar (1912, *Abh. K. K. zool.-bot. Ges. Wien* 7 (1) : 1—221, 5 pls.) the emendation *Dictyophora* is used, but in the most recent catalogue—by Metcalf (1946, *Gen. Cat. Hemipt.* Fasc. 4, Part 8 : 1—246)—the original *Dictyophara* is used. The tendency is for modern authors to use the original spelling rather than the emendation, following the idea that the correct classical spelling does not matter in a generic name. *Dictyophora*, of course, means ‘Net-bearer’, presumably referring to the net-like venation, and is etymologically correct. Burmeister’s assumption was that *Dictyophara* Germar was a misspelling for *Dictyophora* but it is possible that Germar, thinking of the supposed luminous properties of the FULGORIDAE, had in mind the Greek word *φάρος*, a lighthouse and transliterated it ‘-phara’.”

3. It is evident from the information furnished by Dr. China that Germar’s own paper contains no evidence to suggest that the spelling “*Dictyophara*”, as used by him, was a “faute” of any of the three kinds recognised by the present Article 19. It is evident also that the emendation *Dictyophora* has not won general acceptance—rather the reverse. In these circumstances there can be no case for discarding the original spelling *Dictyophara* under Article 19 or for asking the Commission to use its Plenary Powers to give valid force to the emendation *Dictyophora* published by Burmeister in 1835.

9. **Publication of the present application :** The present application and Mr. Hemming’s Report on the issues involved, together with Mr. Hemming’s separate application for a *Declaration* interpreting Article 30, Rule (f), were sent to the printer in May 1951 and were published on 28th September 1951 in Part 2 of

volume 6 of the *Bulletin of Zoological Nomenclature* (Fennah, 1951, *Bull. zool. Nomencl.* 6 : 34—37; Hemming, 1951, *ibid.* 6 : 37—44 (Report on the case of *Laternaria* and *Fulgora*); *id.*, 1951, *ibid.* 6 : 45—48 (application for a *Declaration* interpreting Rule (f) in Article 30)).

10. Issue of Public Notices in 1951 : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 28th September 1951 both in Part 2 of volume 6 of the *Bulletin of Zoological Nomenclature* (the Part in which Mr. Fennah's application was published) and also to the other prescribed serial publications. As in the case of the Public Notice given in 1947 (paragraph 3 above), the publication of these Notices in 1951 elicited no objection to the action proposed.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

11. Issue of Voting Paper V.P.(52)45 : On 15th May 1952, a Voting Paper V.P.(52)45 was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the name *Fulgora* Linnaeus, 1767, as set out in Points (1) to (5) in paragraph 18 on page 44 of volume 6 of the *Bulletin of Zoological Nomenclature*" [*i.e.*, in the Report reproduced in paragraph 7 of the present *Opinion*].

12. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 15th August 1952.

13. Particulars of the Voting on Voting Paper V.P.(52)45 : The state of the voting on Voting Paper V.P.(52)45 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Riley ; Hering ; Calman ; Dymond ; Hankó ; Bonnet ;
Vokes ; do Amaral ; Pearson ; Bradley ; Hemming ;
Esaki ; Lemche ; Cabrera ; Stoll ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned, two (2) :*

Jaczewski ; Mertens.

14. Declaration of Result of Vote : On 16th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)45, signed a Certificate that the Votes cast were as set out in paragraph 13 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

15. The decision taken by the Commission when voting on the present application to place the generic name *Dictyophara* Germar, 1833, on the *Official List of Generic Names in Zoology* in the foregoing spelling, that is, in the original spelling used by Germar, involved the rejection of the emended spelling *Dictyophora* published by Burmeister in 1835 (paragraph 8 above), but by inadvertence an express proposal that this latter spelling should be placed on the *Official Index of Rejected and Invalid*

Generic Names in Zoology was not included in the recommendation submitted, though the recording in this way of every name rejected by the Commission is obligatory under the regulations governing the placing of names on the *Official Lists* and *Official Indexes*. The opportunity presented by the preparation of the present *Opinion* has been taken to make good this accidental omission.

16. On 28th April 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)45, as amplified in the manner specified in paragraph 15 above.

17. The following are the original references for the names placed on *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

- Dictyophara* Germar, 1833, *Rev. Ent.* **1** (4) : 175
Dictyophora Burmeister, 1835, *Handb. Ent.* **2** (1) : 159
europaea, *Fulgora*, Linnaeus, 1767, *Syst. Nat.* (ed. 12) **1** (2) : 704
Fulgora Linnaeus, 1767, *Syst. Nat.* (ed. 12) **1** (2) : 703
Laternaria Linnaeus, 1764, *Mus. Lud. Ulr.* : 152
laternaria, *Cicada*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 434
Noctiluca Houttuyn, 1766, *Natuurl. Hist.* : 245

The reference for the selection of a type species for the genus *Dictyophara* Germar, 1833, referred to in the Ruling given in the present *Opinion* is : Desmarest, 1845, in d'Orbigny, *Dict. univ. Hist. nat.* (nouv. ed.) **5** : 121.

18. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.)75 has been allotted.

19. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

20. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

21. The present *Opinion* shall be known as *Opinion* Three Hundred and Twenty-Two (322) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Eighth day of April, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.,

Secretary to the Commission

VOLUME 9. Part 14. Pp. 209—226

OPINION 323

Validation and interpretation, under the Plenary Powers, of the specific name *angulatus* Schlotheim, 1820, as published in the combination *Ammonites angulatus* for the type species of the genus *Schlotheimia* Bayle, 1878 (Class Cephalopoda, Order Ammonoidea)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 323

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N. Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N. Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 323

VALIDATION AND INTERPRETATION, UNDER THE
PLENARY POWERS, OF THE SPECIFIC NAME
"ANGULATUS" SCHLOTHEIM, 1820, AS
PUBLISHED IN THE COMBINATION
"AMMONITES ANGULATUS" FOR THE
TYPE SPECIES OF THE GENUS
"SCHLOTHEIMIA" BAYLE,
1878 (CLASS CEPHALOPODA,
ORDER AMMONOIDEA)

RULING : (1) Under the Plenary Powers, the specific name *angulatus* Sowerby (J.), 1815, as published in the combination *Ammonites angulatus*, is hereby suppressed for the purposes both of the Law of Priority and of the Law of Homonymy, and the specific name *angulatus* Schlotheim, 1820, as published in the combination *Ammonites angulatus*, is hereby validated.

(2) It is hereby directed that the nominal species *Ammonites angulatus* Schlotheim, 1820, is to be interpreted by reference to the lectotype from the Schlotheim collection so selected and figured by Lange in 1951.

(3) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* as Name No. 769 :—*Schlotheimia* Bayle, 1878 (gender : feminine) (type species, by monotypy : *Ammonites angulatus* Schlotheim, 1820, as validated, under the Plenary Powers, under (1) above and as interpreted under (2) above).

(4) The under-mentioned generic name is hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name No. 188 :—*Scamnoceras* Lange, 1924 (a junior objective synonym of *Schlotheimia* Bayle, 1878, as defined under (3) above).

(5) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 203 and 204 respectively : (a) *angulatus* Schlotheim, 1820, as published in the combination *Ammonites angulatus*, as validated under the Plenary Powers, under (1) above and as defined under (2) above (specific name of type species of *Schlotheimia* Bayle, 1878) ; (b) *princeps* Buckman, 1923, as published in the combination *Schlotheimia princeps*.

(6) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Name No. 106 :—*angulatus* Sowerby (J.), 1815, as published in the combination *Ammonites angulatus* and as suppressed, under the Plenary Powers, under (1) above.

I.—THE STATEMENT OF THE CASE

The problem represented by the nominal genus *Schlotheimia* Bayle, 1878, was first brought to the attention of the International Commission by Dr. W. J. Arkell (*Sedgwick Museum, Cambridge University, Cambridge*) in June 1949, and 19th February 1950, Dr. Arkell submitted the following application in regard to it for the consideration of the Commission :—

On the generic names “*Schlotheimia*” Bayle, 1878, and “*Scamnoceras*” Lange, 1924 ; proposed use of the Plenary Powers to validate the name “*Ammonites angulatus*” Schlotheim, 1820 (Class Cephalopoda, Order Ammonoidea) (Jurassic)

By W. J. ARKELL, M.A., D.Sc., F.R.S.
(*Sedgwick Museum, Cambridge University, Cambridge*)

1. The generic name *Schlotheimia* was introduced by Bayle in 1878 in the explanation of his pl. 65, fig. 1, in the combination *Schlotheimia*

angulata Schlotheim. No text was published. In the following year a list of the type species of Bayle's genera was published by H. Douvillé (1879 : 91) and in this *A. angulatus* Schlotheim was categorically stated to be the type species of *Schlotheimia* Bayle.

2. The figure given by Bayle in illustration of this species is commonly believed to differ from *Ammonites angulatus* Schlotheim at least subgenerically. It was therefore renamed *S. princeps* by Buckman (1923 : pl. cccxcv, where Bayle's figure is reproduced and labelled "genotype").

3. In accordance with the general practice of the 1920s, Bayle's genus was considered to have been based on the material handled by him, and *S. princeps* has been cited as type species of *Schlotheimia* by Buckman (1923, *loc. cit.*), by Spath (1924 : 197 ; 1925 : 201) and by Lange (1925 : 469). Lange (1924 : 198) proposed the generic name *Scamnoceras* for *Ammonites angulatus* Schlotheim.

4. The position stated in para. 3 could only be legalised by suspension of the Rules. As the Rules stand, *A. angulatus* Schlotheim, 1820, is the type species of *Schlotheimia* by monotypy, and the generic name *Scamnoceras* Lange, 1924, is an objective synonym of *Schlotheimia* Bayle, 1878.

5. The combination *Schlotheimia angulata* had been familiar and had become current in the literature for 45 years before the refinements introduced in the 1920s (see para. 3), and many authors have continued to use it since. So familiar is this combination, and so important the species *A. angulatus* Schlotheim, that a permanent settlement of the question is urgently needed. (See paras. 6 and 7.)

6. The zone of *Ammonites angulatus* was set up by Oppel (1856 : 14) and has been constantly used in stratigraphical geology ever since. It represents an important series of strata which are developed throughout Europe and also elsewhere. From the geologist's point of view a change of the name of this zone cannot be contemplated.

7. The family ANGULATIDAE was founded by Hyatt (1874 : 15) for *A. angulatus* and its allies, and is still in general use under the corrected name SCHLOTHEIMIDAE Spath (1925 : 201). SCHLOTHEIMIDAE having comparatively recently replaced ANGULATIDAE in the literature, it is obviously desirable that the type species of *Schlotheimia* should be *A. angulatus*, which was in fact Hyatt's original type although he made a technical error in basing a family upon a species.

8. There are, however, the following difficulties in recognising the species *A. angulatus* Schlotheim and upholding it as the type species of the genus *Schlotheimia* and thence of the family SCHLOTHEIMIDAE, and as index of the Angulatus Zone. (See paras. 9, 10.)

9. *Ammonites angulatus* Schlotheim (1820 : 70) was at publication a homonym of *A. angulatus* J. Sowerby (1815 : 2 : 9, pl. cvii, fig. 1), an ammonite described by Sowerby as "a rare and curious specimen", from the Upper Lias and belonging to an entirely different genus (*Dactyloceras* Hyatt, 1867 : p. 95. Type species : *A. annulatus* Sowerby, selected by Buckman, 1911). There never has been and never can be any risk of confusion, for the two genera belong to different families and the homonymy has not hitherto been noticed. The name *Dactyloceras angulatum* (Sowerby) is unknown in the literature. Quenstedt (1846 : 173) considered it a synonym of *D. commune* (J. Sowerby, 1815) and was probably right.

10. *A. angulatus* Schlotheim (1820 : 70) was never figured by its author. Its validity rests on (a) a brief description and localities, and (b) citations of four figures : Scheuchzer, 1718, fig. 50, and Bourget, 1742, figs. 272, 273, 275. Mr. D. T. Donovan points out that all Bourget's three figures are copies of figures in Scheuchzer, and that in particular Bourget's fig. 272 is a copy of Scheuchzer's fig. 50 ; and that therefore only three figures have to be considered. He also points out that Bourget's figs. 272 and 273 are described in their explanations as having keels, a point evidently not noticed by Schlotheim whose description of *A. angulatus* specifies that there is no keel or furrow on the venter. These two figures therefore should be ruled out, leaving Bourget's fig. 275 (copied from Scheuchzer's fig. 24) as the only eligible syntype among the cited figures. But, like the figure of the type species of the genus *Ammonites* Bruguière, this figure is unrecognisable ; it could be a Cretaceous Hoplitid.

11. *A. angulatus* Schlotheim therefore must rest solely on Schlotheim's description, supported by his localities. These are "From the neighbourhood of Coburg, from Heinberg and the Bamberg region", and the description which reads "Distinguished from other ammonites by its ribbing, which is strongly developed and joined to make an acute angle on the sharp venter, without any ventral line."

12. Schlotheim mentioned that his material consisted of 15 specimens. None of these has since been figured, and the present whereabouts of the collection is unknown. The first author to use Schlotheim's name, however, Quenstedt (1845 : 74, pl. iv, fig. 2), consulted the type material, for he wrote "That this alone is Schlotheim's *angulatus*

is proved by the specimens in Schlotheim's collection in Berlin, and the short but exact description in the *Petrifactenkunde*, p. 71". It is therefore proposed that Quenstedt's pl. iv, fig. 2c, 2d should be taken as the basis for the recognition of *Ammonites angulatus* Schlotheim. The locality is Bempflingen, Swabia.

13. The considerations mentioned in paras. 6 and 7 make this a clear case where it is desirable that the Commission should use its Plenary Powers to set aside an earlier homonym of no use in nomenclature in order to save a later homonym of over a century's standing in the literature and a key name in stratigraphical geology as well as in ammonite systematics. (Cf. *Sphaeroceras* Bayle dealt with in Commission file Z.N.(S.) 405).¹

14. I accordingly recommend that the International Commission on Zoological Nomenclature should :—

(1) use its Plenary Powers :—

(a) to suppress for all purposes the trivial name *angulatus* Sowerby (J.), 1815, as published in the combination *Ammonites angulatus* ;

(b) to validate the trivial name *angulatus* Schlotheim, 1820, as published in the combination *Ammonites angulatus* ;

(c) to direct that the trivial name *angulatus* Schlotheim, 1820, as published in the foregoing combination, is to be applied to the species figured by Quenstedt under the above name in 1845 (*Die Cephalopoden*) as figs. 2c and 2d on plate iv of the above work ;

(2) place on the *Official List of Generic Names in Zoology* the generic name *Schlotheimia* Bayle, 1878 (gender : feminine) (type species, by monotypy : *Ammonites angulatus* Schlotheim 1820, validated as in (1)(b), and defined as in (1)(c) above) ;

(3) place the generic name *Scammoceras* Lange, 1924, on the *Official Index of Rejected and Invalid Generic Names in Zoology* ;

¹ See *Opinion 300* (1954, *Opinions and Declarations rendered by the International Commission on Zoological Nomenclature* 8 : 237—248).

- (4) place the under-mentioned specific trivial names on the *Official List of Specific Trivial Names in Zoology* :—
- (a) *angulatus* Schlotheim, 1820, as published in the combination *Ammonites angulatus*, as validated and defined in (1) above ;
- (b) *princeps* Buckman, 1923, as published in the combination *Schlotheimia princeps* ;
- (5) place the trivial name *angulatus* Sowerby (J.), 1815, as published in the combination *Ammonites angulatus*, on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*.

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II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : Upon the receipt of Dr. Arkell's preliminary communication in June 1949, the problem involved in connection with the name *Schlotheimia* Bayle, 1878, was allotted the Registration Number Z.N.(S.) 422.

3. Publication of the present application : The present application was sent to the printer in December 1950 and it was published on 4th May 1951 in Triple-Part 6/8 of volume 2 of the *Bulletin of Zoological Nomenclature* (Arkell, 1951, *Bull. zool. Nomencl.* 2 : 204—207).

4. Issue of Public Notices : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 4th May 1951, both in Triple-Part 6/8 of volume 2 of the *Bulletin of Zoological Nomenclature*, the Part in which Dr. Arkell's application was published, and also to the other serial publications. In addition, Public Notice was given to certain palaeontological serial publications in Europe and

America. The publication of these Notices elicited no objection to the action proposed.

5. Support received for the present application : Support for the present application was received from the following specialists :—(a) Dr. D. T. Donovan (*University of Bristol, Department of Geology, Bristol*); (b) Dr. Helmut Hölder (*Geologisch-Paläontologisches Institut der Universität Tübingen, Germany*); (c) the Joint Committee on Zoological Nomenclature for Paleontology in America. The communications so received are given in the immediately following paragraphs.

6. Support received from Dr. D. T. Donovan (University of Bristol, Department of Geology, Bristol) : On 28th May 1951, Dr. D. T. Donovan (*University of Bristol, Department of Geology, Bristol*) addressed a letter to the Commission commenting upon a number of applications, including the present one. The following is an extract from the foregoing letter of the passage in which Dr. Donovan indicated his support for the present application (Donovan, 1951, *Bull. zool. Nomencl.* **2** : 335—336) :—

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(2) Page 204. *The trivial name angulatus Schlotheim, as published in the binominal combination Ammonites angulatus (Z.N.(S.) 422) :—*

I agree with the proposal to suppress the trivial name *angulatus* Sowerby, 1815, as published in the binominal combination *Ammonites angulatus*, in favour of *angulatus* Schlotheim, 1820, as published in the same binominal combination, as it will bring the legal position into line with universal usage. Any possible doubt as to the identity of Schlotheim's species has been removed since Dr. Arkell's paragraphs 10—12 were written, by the publication of type material by Lange (1951, *Palaeontographica* **100** (Abt A) : pl. 1, fig. 2 (lectotype), also fig. 6 and pl. 2, fig. 13).

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7. Support received from Dr. Helmut Hölder (Geologisch-Paläontologisches Institut der Universität Tübingen, Germany) :

On 23rd October 1951, Dr. Helmut Hölder (*Geologisch-Paläontologisches Institut der Universität Tübingen*) submitted a statement through Professor Dr. Robert Mertens (*Natur-Museum u. Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a. M., Germany*) setting out his views on the applications relating to the names of ammonites submitted by Dr. Arkell which had been published in Triple-Part 6/8 of volume 2 of the *Bulletin of Zoological Nomenclature*. The following is an extract from Dr. Hölder's communication of the passage in which he indicated his support for the present application :—

Dieser zuletzt genannte Fall liegt bei der Fixierung von *Schlotheimia angulata* ((10), vgl. Bull. S. 206) durch Quenstedt 1845—49, Taf. 4, Fig. 2c u. d vor. Denn hier ist der Anschluss an die Absicht des Autors Schlotheim durch Quenstedt's Kenntnis der Schlotheim'schen Sammlung und den ausdrücklichen Hinweis auf die Stücke dieser Sammlung gewährleistet. Trotzdem könnte auch hier ein Zusatz wie "*Schlotheimia angulata* Schloth. I.C. 51" eine Erleichterung für den Leser künftiger Publikationen bedeuten.

8. Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America :

On 9th April 1952 there was received a large number of letters commenting on various applications previously published in the *Bulletin of Zoological Nomenclature* from Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America. Included among these was a letter, reporting that the members of the Joint Committee supported the present application by six votes to five. The foregoing letter was dated 6th February 1952, and its late receipt was apparently due to a decision to defer the despatch to the Commission of the letters containing comments by members of the Joint Committee until all the letters in question had been prepared. By the date on which this letter was received the Prescribed Period of Public Notice had expired and the Voting Paper (V.P.(52)24) had been prepared. It was therefore impossible to include in that Voting Paper a reference to Professor Sinclair's letter, but, when the Voting Paper was despatched (24th April), a supplementary

sheet containing the particulars furnished by Professor Sinclair was issued to the Members of the Commission, who were thus placed in possession of the views of the members of the Joint Committee at the same time that they received the Voting Paper relating to the present case. The following is the text of Professor Sinclair's letter :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you that, being polled, they voted : To support the petition (six) :—(1) Katherine V. W. Palmer ; (2) Bryan Patterson ; (3) Bobb Schaeffer ; (4) J. Marvin Weller ; (5) John B. Reeside, Jr. ; (6) R. C. Moore. To oppose the petition (five) :—(1) Don L. Frizzell ; (2) A. Myra Keen ; (3) Siemon W. Muller ; (4) John W. Wells ; (5) G. Winston Sinclair.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

9. Issue of Voting Paper V.P.(52)24 : On 24th April 1952 a Voting Paper (V.P.(52)24) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal “relating to the names *Schlotheimia* Bayle, 1878, and *Scamnoceras* Lange, 1924, as specified in Points (1) to (5) on page 206 of volume 2 of the *Bulletin of Zoological Nomenclature*” [i.e. in paragraph 14 of the application reproduced in the first paragraph of the present *Opinion*].

10. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 24th July 1952.

11. Particulars of the Voting on Voting Paper V.P.(52)24 :
The state of the voting on Voting Paper V.P.(52)24 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received):*

Calman ; Hering ; Dymond ; Esaki ; do Amaral ;
Hankó ; Bonnet ; Lemche ; Vokes ; Cabrera ; Pearson ;
Bradley ; Boschma ; Mertens ; Hemming ; Riley ;

(b) *Negative Vote, one (1) :*

Stoll ;

(c) *Voting Paper not returned, one (1) :*

Jaczewski.

12. Declaration of Result of Vote : On 25th July 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)24, signed a Certificate that the Votes cast were as set out in paragraph 11 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

13. Selection of a lectotype for “*Ammonites angulatus*” Schlotheim, 1820, by Lange in 1951 : On 18th March 1954, Dr. W. J. Arkell (the applicant in the present case) addressed a letter to the Commission drawing attention to the selection by Lange in 1951 of a specimen of *Ammonites angulatus* Schlotheim, 1820, from the Schlotheim collection, to be the lectotype of the foregoing species. At the time of the receipt of this letter, the

draft of an *Opinion* giving effect to the Vote on this case by the Commission in 1952 had already been prepared, but Mr. Hemming, as Secretary, took the view that the information so received created a new situation in which it was desirable that a further consultation with the Commission should be held. Accordingly, on 3rd April 1954, Mr. Hemming despatched a memorandum to the Members of the Commission, in which, after recalling the Vote already taken in this case, he proceeded as follows :—

Name of the type species of “Schlotheimia” Bayle, 1878

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

(Extract from a memorandum dated 3rd April 1954)

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4. I have recently been engaged in preparing the *Opinion* required to give effect to the foregoing decision and I have been in correspondence in regard to it with Dr. Arkell. Dr. Arkell has now informed me that he has learnt of the publication of a paper by Lange (March 1951, *Palaeontographica* **100** (Abt A) : pl. 1, fig. 2) on this subject which appeared after the submission to the Commission of his application, in which Lange (a) figured a specimen of *Ammonites angulatus* Schlotheim, 1820, from the Schlotheim collection, and (b) designated this specimen to be the lectotype of this nominal species. Dr. Arkell considers that the selection of the above previously unfigured specimen from the Schlotheim collection satisfactorily defines the nominal species *Ammonites angulatus* Schlotheim and he no longer desires that his proposal that this species should be defined by reference to Quenstedt's figures should be proceeded with, this not now being necessary in view of the discovery of the specimen in the Schlotheim collection and its designation as the lectotype of this species.

5. If it had not been for the delay which occurred in the preparation of *Opinions* giving effect to the decisions taken by the Commission in 1952—a delay which in the conditions then obtaining was inevitable

in view of the need for concentrating upon preparations for the Copenhagen meeting—the *Opinion* embodying the Commission's decision in the present case would have been rendered long ago. In view, however, of the fact that the *Opinion* on this case which was recently prepared has not yet been published, it is still possible to modify the Ruling given in it, if this is considered desirable. It is thought that in the circumstances now disclosed, the Commission may take the view that, as the object sought in this application—the obtaining of an authoritative interpretation of the nominal species *Ammonites angulatus* Schlotheim, 1820—is now obtainable by reference to the lectotype which has been selected and in consequence the use of the Plenary Powers is no longer required, it would be better to modify the portion of the previous decision under which those Powers were invoked for this purpose.

6. The question now submitted to the Commission is thus :—
 (1) whether the decision to use the Plenary Powers for the purpose of determining the nominal species *Ammonites angulatus* Schlotheim, 1820, should be replaced by a decision that the nominal species shall be interpreted by reference to the lectotype selected by Lange in 1951 (this latter decision being one which does not involve the use of the Plenary Powers) or (2) whether the existing decision for the determination of the taxonomic species represented by the foregoing nominal species (i.e. the use of the Plenary Powers to secure that the foregoing nominal species should be interpreted by reference to the figures published by Quenstedt in 1845) shall remain unaltered.

14. Issue of Voting Paper V.P.(O.M.)(54)1 : Simultaneously with the submission to the Commission on 3rd April 1954 of the memorandum, an extract from which has been given in the immediately preceding paragraph, a Voting Paper (V.P.(O.M.)(54)1) was issued in which the Members of the Commission were invited to vote affirmatively for one or other of the alternatives. The alternatives so submitted were as follows :—

ALTERNATIVE "A"

Substitution for the existing decision to use the Plenary Powers (to secure the interpretation of *Ammonites angulatus* Schlotheim, 1820, by reference to certain figures published by Quenstedt in 1845) of a revised decision that the species *Ammonites angulatus* Schlotheim, 1820, is to be interpreted by reference to the lectotype from the Schlotheim collection so selected and figured by Lange in 1951.

ALTERNATIVE "B"

Retention of the existing decision to use the Plenary Powers to secure the identification of the above species by reference to the figures 2c and 2d on pl. iv of the work by Quenstedt entitled *Die Cephalopoden* published in 1845.

15. The Prescribed Voting Period for the Voting on Voting Paper V.P.(O.M.)(54)1 : As the foregoing Voting Paper was issued under the One-Month Rule, the Prescribed Voting Period closed on 3rd May 1954.

16. Particulars of the Voting on Voting Paper V.P.(O.M.)(54)1 : At the close of the Voting Period on 3rd May 1954 the state of the voting on Voting Paper V.P.(O.M.)(54)1 was as follows :—

(a) *Votes in favour of Alternative "A" (acceptance of Lange's selection of a lectotype for "Ammonites angulatus" Schlotheim, 1820) had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received²):—*

Holthuis ; Lemche ; Vokes ; Hering ; Sylvester-Bradley ; Bonnet ; Mertens ; Cabrera ; Riley ; Stoll ; Pearson ; Hemming ; Jaczewski ; Bradley (J.C.) ; Boschma ;

(b) *Votes in favour of Alternative "B" (retention of decision to define "Ammonites angulatus" Schlotheim, 1820, by reference to certain figures published by Quenstedt in 1845) had been given by the following two (2) Commissioners (arranged in the order in which votes were received):—*

Dymond ; Esaki ;

(c) *Voting Papers not returned, two (2)³:—*

do Amaral ; Hankó.

² The following zoologists who were Members of the International Commission at the time of the issue of Voting Paper V.P.(O.M.)(54)1 were not Members of the Commission at the time of the issue of Voting Paper V.P.(52)24 :—

Mr. P. C. Sylvester-Bradley (*Sheffield University, Sheffield, England*)

Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*).

³ After the close of the Prescribed Voting Period, votes in favour of Alternative "A" were received from Commissioners do Amaral (on 19th May 1954) and Hankó (on 25th May 1954).

17. Declaration of Result of Vote on Voting Paper V.P.(O.M.)(54)1 : On 4th May 1954, Mr. Hemming, Secretary to the International Commission, as Returning Officer for the vote on Voting Paper V.P.(O.M.)(54)1, signed a Certificate that the votes cast were as set out in paragraph 16 above and declaring that the proposal submitted as Alternative "A" in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

18. On 4th May 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)24, as amended by its Vote on Voting Paper V.P.(O.M.)(54)1.

19. The following are the original references for the names which appear in the Ruling given in the present *Opinion*:—

angulatus, *Ammonites*, Sowerby (J.), 1815, *Min. Conch.* **2** : 9, pl. cvii, fig. 1

angulatus, *Ammonites*, Schlotheim, 1820, *Die Petrefactenk.* : 70
princeps, *Schlotheimia*, Buckman, 1923, *Type Ammonites* **4** : pl. cccxcv

Scannoceras Lange, 1924, *Jahrb. preuss. geol. Landesanst.* **44** : 198

Schlotheimia Bayle, 1878, *Explic. Carte géol. France* **4** (Atlas) : pl. 65, fig. 1

20. The following is the reference for the selection of a lectotype for the nominal species *Ammonites angulatus* Schlotheim, 1820, specified in the second paragraph of the Ruling given in the present *Opinion*:—Lange (1951, *Palaeontographica* **100** (Abt A) : [123] (=expl. to pl.), pl. 1, fig. 2.

21. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in*

Zoology by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(S.) 864 has been allotted.

22. At the time of the submission of the application dealt with in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

23. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

24. The present *Opinion* shall be known as *Opinion* Three Hundred and Twenty-Three (323) of the International Commission on Zoological Nomenclature.

DONE in London, this Fourth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 15. Pp. 227—250

OPINION 324

Addition to the *Official List of Generic Names in Zoology*
of the names of twenty-one nominal genera of Ammonites
(Class Cephalopoda, Order Ammonoidea) and matters
incidental thereto



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 324

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 324

ADDITION TO THE "OFFICIAL LIST OF GENERIC NAMES IN ZOOLOGY" OF THE NAMES OF TWENTY-ONE NOMINAL GENERA OF AMMONITES (CLASS CEPHALOPODA, ORDER AMMONOIDEA) AND MATTERS INCIDENTAL THERETO

RULING : (1) The correct spelling of the name published both as *Oecotraustes* and as *Oekotraustes* by Waagen in 1869 is *Oecotraustes*.

(2) The correct spelling of the name published by Hyatt in 1877 as *Quenstedioceras* is *Quenstedtoceras*.

(3) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* as Name Nos. 770 to 790 respectively :—

- (a) *Agassiceras* Hyatt, 1875 (gender : neuter) (type species, by selection by Buckman (S.) (1894) : *Ammonites scipionianus* d'Orbigny, 1844)
- (b) *Angulaticeras* Quenstedt, 1883 (gender : neuter) (type species, by selection by Lange (1924) : *Ammonites lacunatus* Buckman (J.), 1844)
- (c) *Asteroceras* Hyatt, 1866 (gender : neuter) (type species, by selection by Buckman (S.), 1911 : *Ammonites stellaris* Sowerby (J.), 1815)
- (d) *Bigotites* Nicolesco, 1918 (gender : masculine) (type species, by selection by Nicolesco (1931) : *Bigotella petri* Nicolesco, 1917)
- (e) *Cadoceras* Fischer, 1882 (gender : neuter) (type species, by selection by Spath (1932) : *Ammonites sublaevis* Sowerby (J.), 1814)

- (f) *Cadomites* Munier-Chalmas, 1892 (gender : masculine) (type species, by original designation : *Ammonites deslongchampsii* d'Orbigny, 1846)
- (g) *Coroniceras* Hyatt, 1867 (gender : neuter) (type species, by selection by Bonarelli (1900) : *Ammonites kridion* Hehl, [1830])
- (h) *Echioceras* Bayle, 1878 (gender : neuter) (type species, by monotypy : *Ammonites raricostatus* Zieten, [1831])
- (i) *Garantiana* Mascke, 1907 (gender : feminine) (type species, by original designation : *Ammonites garantianus* d'Orbigny, 1846)
- (j) *Lamberticeras* Buckman (S.), 1920 (gender : neuter) (type species, by original designation : *Ammonites lamberti* Sowerby (J.), 1819)
- (k) *Ludwigella* Buckman (S.), 1901 (gender : feminine) (type species, by monotypy : *Ammonites concavus* Sowerby (J.), 1815)
- (l) *Oecotraustus* Waagen, 1869 (gender : masculine) (type species, by selection by Munier-Chalmas (1892) : *Oecotraustes genicularis* Waagen, 1869)
- (m) *Oppelia* Waagen, 1869 (gender : feminine) (type species, by selection by Douvillé (H.), (1884) : *Ammonites subradiatus* Sowerby (J. de C.), 1823)
- (n) *Phlyseogrammoceras* Buckman (S.), 1901 (gender : neuter) (type species, by monotypy : *Ammonites dispansus* Lycett, 1860)
- (o) *Pleuroceras* Hyatt, 1867 (gender : neuter) (type species, by selection by Fischer (1882) : *Ammonites spinatus* Bruguière, 1789)
- (p) *Pseudogrammoceras* Buckman (S.), 1901 (gender : neuter) (type species, by monotypy : *Ammonites struckmanni* Denckmann, 1887)

- (q) *Pseudoperisphinctes* Schindewolf, 1923 (gender : masculine) (type species, by monotypy : *Perisphinctes rotundatus* Roemer (J.), 1911)
- (r) *Psiloceras* Hyatt, 1867 (gender : neuter) (type species, by selection by Spath (1924) : *Ammonites planorbis* Sowerby (J. de C.), 1824)
- (s) *Quenstedtoceras* (emend. of *Quenstedioceras*) Hyatt, 1877 (gender : neuter) (type species, by monotypy : *Ammonites leachi* Sowerby (J.), 1819)
- (t) *Sigaloceras* Hyatt, 1900 (gender : neuter) (type species, by original designation : *Ammonites calloviensis* Sowerby (J.), 1815)
- (u) *Stephanoceras* Waagen, 1869 (gender : neuter) (type species, by selection by Buckman (S.) (1898) : *Ammonites humphriesianus* Sowerby (J. de C.), 1825).

(4) The under-mentioned names, being the specific names of the type species of the nominal genera enumerated in (3) above as there severally so specified, are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 205 to 225 respectively :—(a) *calloviensis* Sowerby (J.), 1815, as published in the combination *Ammonites calloviensis* ; (b) *concavus* Sowerby (J.), 1815, as published in the combination *Ammonites concavus* ; (c) *deslongchampsii* d'Orbigny, 1846, as published in the combination *Ammonites deslongchampsii* ; (d) *dispansus* Lycett, 1860, as published in the combination *Ammonites dispansus* ; (e) *garantianus* d'Orbigny, 1846, as published in the combination *Ammonites garantianus* ; (f) *genicularis* Waagen, 1869, as published in the combination *Oecotraustes genicularis* ; (g) *humphriesianus* Sowerby (J. de C.), 1825, as published in the combination *Ammonites humphriesianus* ; (h) *kridion* Hehl in Zieten, [1830], as published in the combination *Ammonites kridion* ; (i) *lacunatus* Buckman (J.), 1844, as published in the combination *Ammonites lacunatus* ; (j) *lamberti* Sowerby (J.), 1818, as published in

the combination *Ammonites lamberti* ; (k) *leachi* Sowerby (J.), 1819, as published in the combination *Ammonites leachi* ; (l) *petri* Nicolesco, 1917, as published in the combination *Bigotella petri* ; (m) *planorbis* Sowerby (J. de C.), 1824, as published in the combination *Ammonites planorbis* ; (n) *raricostatus* Zieten, [1831], as published in the combination *Ammonites raricostatus* ; (o) *rotundatus* Roemer (J.), 1911, as published in the combination *Perisphinctes rotundatus* ; (p) *scipionianus* d'Orbigny, 1844, as published in the combination *Ammonites scipionianus* ; (q) *spinatus* Bruguière, 1789, as published in the combination *Ammonites spinatus* ; (r) *stellaris* Sowerby (J.), 1815, as published in the combination *Ammonites stellaris* ; (s) *struckmanni* Denckmann, 1887, as published in the combination *Ammonites struckmanni* ; (t) *sublaevis* Sowerby (J.), 1814, as published in the combination *Ammonites sublaevis* ; (u) *subradiatus* Sowerby (J. de C.), 1823, as published in the combination *Ammonites subradiatus*.

(5) The under-mentioned generic names or alleged generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name Nos. 189 to 197 respectively :—(a) *Bourkelamberticeras* Buckman (S.), 1920 (a junior objective synonym of *Lamberticeras* Buckman (S.), 1920) ; (b) *Garantia* Rollier, 1909 (an Invalid Emendation of *Garantiana* Mascke, 1907) ; (c) *Garantiana* Hyatt, 1900 (a *nomen nudum*) ; (d) *Lamberticeras* Kilian, 1910 (a *nomen nudum*) ; (e) *Oekotraustes* Waagen, 1869 (an Invalid Original Spelling of *Oecotraustes* Waagen, 1869) ; (f) *Paltopleuroceras* Buckman (S.), 1898 (a junior objective synonym of *Pleuroceras* Hyatt, 1867) ; (g) *Quenstedticeras* Teisseyre, 1889 (an Invalid Emendation of the defective form, *Quenstedioceras*, in which the name *Quenstedtoceras* Hyatt, 1877, was originally published) ; (h) *Quenstedioceras* Hyatt, 1877 (an Invalid Original Spelling of *Quenstedtoceras* Hyatt, 1877) ; (i) *Stepheoceras* Buckman (S.), 1898 (a junior objective synonym of *Stephanoceras* Waagen, 1869).

I.—THE STATEMENT OF THE CASE

On 20th September 1950, Dr. W. J. Arkell (*Sedgwick Museum, Cambridge University, Cambridge*) submitted a list of names of nominal genera of ammonites for admission to the *Official List of Generic Names in Zoology*. Correspondence ensued between the Secretary and Dr. Arkell in regard to various matters in connection with this application. These were concluded on 20th February 1951, when the following application was submitted :—

**Proposed addition to the “ Official List of Generic Names in Zoology ”
of the names of twenty-one genera of Jurassic Ammonites
(Class Cephalopoda, Order Ammonoidea) and matters
incidental thereto**

By W. J. ARKELL, M.A., D.Sc., F.R.S.
(*Sedgwick Museum, Cambridge University, Cambridge*)

1. I submit herewith to the International Commission on Zoological Nomenclature a list of the names of twenty-one genera of Jurassic ammonites which I recommend should be placed on the *Official List of Generic Names in Zoology*. Each of these names is an available name in the sense that it is not a homonym of any generic name previously published as the valid name of a genus in the Animal Kingdom. The species cited in the list now submitted as the type species of each of the genera in question is believed to have been correctly so determined in accordance with the provisions of Article 30 of the *Règles*, being the type species either by original designation (Rule (a)), or by monotypy (Rule (c)), or by subsequent selection (Rule (g)).

2. The twenty-one names now submitted have been selected because in the past there have been differences of opinion among specialists in regard either to the species which should be accepted as the type species of the genera concerned or to other questions relating to these names. In view of these inconsistencies in the literature, it is very desirable that the use of these names in the sense required by the *Règles* should be stabilised as soon as possible by these names being placed upon the *Official List* with their correct type species. The nature of the inconsistencies referred to above and the grounds on which it is considered that the solutions now recommended for recognition in the *Official List* are in strict accordance with the provisions of the *Règles*, is explained (so far as is necessary) in the series of notes given in the Appendix to the present application.

3. In seven cases, points calling for some special action arise. These cases are set out below :—

- (1) *Cadoceras* Fischer, 1882 : As explained in the Appendix, no valid type selection has ever been made for this genus. I accordingly now select, as its type species, *Ammonites sublaevis* Sowerby (J.), 1814 (= *Cadoceras sublaeve* (Sowerby, 1814)).
- (2) *Garantiana* Mascke, 1907 : Prior to the valid publication of this name by Mascke in 1907, it had been published as a *nomen nudum* by Hyatt in 1900 (in Eastman's Zittel, *Textb. Paleont.* 1 : 583). This invalid earlier use of the name *Garantiana* appears in Neave's *Nomenclator Zoologicus* (2 : 440), where its invalid status is correctly noted ; unfortunately, however, Mascke's valid use of this name is not noted in that work. It is desirable, therefore, that, in order to obviate the risk of future misunderstandings, the nomenclatorially non-existent name *Garantiana* Hyatt, 1900, should now be finally disposed of by being placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*. At the same time the uncalled-for emendation *Garantia* Rollier, 1909 (*Arch. Sci. phys. nat. Genève* (4) 28 : 613, 615) should also be placed on the *Official Index*. The type species of the genus *Garantiana* Mascke has been used as a zonal index fossil and is therefore of special importance in stratigraphy.
- (3) *Lamberticer*as Buckman (S.), 1920 : The name *Lamberticer*as was first published as a *nomen nudum* by Kilian in 1910 (*Lethaea geognostica* 3 (No. 1) (Lief. 2) : 194). Possessing no status in zoological nomenclature, the name *Lamberticer*as Kilian, 1910, does not invalidate the later name *Lamberticer*as Buckman, 1920. On erroneous information that the opposite was the case Buckman (1920, *Type Ammonites* 3 : 17) renamed his genus *Bourkelamberticer*as. Both the *nomen nudum* *Lamberticer*as Kilian, 1910, and the junior objective synonym *Bourkelamberticer*as Buckman (S.), 1920, should now be relegated to the *Official Index of Rejected and Invalid Generic Names in Zoology*.
- (4) *Oecotraustes* Waagen, 1869 : When Waagen first published this name, he used two different spellings, namely *Oecotraustes* and *Oekotraustes*. Most subsequent authors have adopted the first of these spellings, which is clearly the more correct. In order to promote uniformity in nomenclatorial practice, it is desirable that the International Commission on Zoological Nomenclature should rule in favour of this spelling, at the same time placing the spelling *Oekotraustes* on the *Official Index of Rejected and Invalid Generic Names in Zoology*.
- (5) *Pleurocer*as Hyatt (A.), 1867 : In the mistaken belief that this name was unavailable by reason of generic homonymy,

Buckman (S.), in 1898 (*Quart. J. geol. Soc.* **54** : 453) replaced it by the name *Paltopleuroceras*, which is therefore an invalid objective synonym. This error was pointed out by Jaworski, 1931 (*Neues Jahrb. für. Min., Beil.-Band* **65** : 86). The name *Paltopleuroceras* has been widely used but not to an extent which would, in my view, justify asking the International Commission to validate it under its Plenary Powers. When the name *Pleuroceras* Buckman is placed on the *Official List*, the name *Paltopleuroceras* should therefore be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*. The type species of the nominal genus *Pleuroceras* Buckman has been used as a zonal index fossil and is therefore of special importance in stratigraphy.

- (6) *Quenstedtoceras* Hyatt, 1877 : When this name was first published, it appeared in the spelling "*Quenstedioceras*". The name of the geologist after whom this genus was named was, however, Quenstedt. It is evident, therefore, that the original spelling (quoted above) was due to a printer's error or to a slip of the pen on the part of Hyatt in 1877. The original error was first detected by Pompeckj in 1899 (*Cape Flora* : 96); in the following year it was silently corrected to "*Quenstedtoceras*" by Hyatt himself (1900, in Eastman's *Zittel, Textb. Paleont.* **1** : 580). Since then the corrected spelling has been generally used in the English-speaking countries (see Arkell, 1939, *Quart. J. Geol. Soc.* **95** : 151). In Continental literature, a third spelling, "*Quenstedticeras*" is generally used, this having been first introduced by Teisseyre in 1889 (*Neues Jahrb. für. Min. Beil.-Band* **6** : 148). This was, however, an unwarranted emendation of Hyatt's name, the termination "-oceras", which is open to no objection, having always been used for this name. The error represented by the original spelling clearly falls within the classes of error specified in Article 19 of the *Règles*, and it is accordingly recommended that the International Commission on Zoological Nomenclature, when placing this generic name on the *Official List*, should expressly amend the spelling to *Quenstedtoceras*. It would be desirable that at the same time the erroneous spelling *Quenstedioceras* and also the erroneous spelling *Quenstedticeras* should be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*.
- (7) *Stephanoceras* Waagen, 1869 : Buckman (S.) in 1898 (*Quart. J. geol. Soc.* **54** : 454) changed this name to *Stepheoceras*, on the mistaken assumption that it was invalidated by *Stephanoceros* Ehrenberg, 1832 (*Abh. preuss. Akad. Wiss.* **1831** : 125) (Rotifera) and, as the more recent of the two names, was accordingly invalid. Both the name *Stephanoceras* Waagen and its invalid substitute *Stepheoceras* Buckman are often misused in Continental literature. See Spath, 1944 (*Geol.*

Mag. **81** : 230). The name *Stepheoceras* Buckman, 1898, being an invalid junior objective synonym of *Stephanoceras* Waagen, 1869, should be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* at the same time that Waagen's *Stephanoceras* is placed on the *Official List*. The type species of the genus *Stephanoceras* Waagen has been used as a zonal index fossil and is therefore of special importance in stratigraphy.

4. The following is the list of generic names which it is recommended should now be placed on the *Official List of Generic Names in Zoology*:—

Names recommended for addition to the “ Official List of Generic Names in Zoology ”

- Agassiceras** Hyatt, 1875, *Proc. Boston Soc. nat. Hist.* **17** : 225 (type species, by selection by Buckman (S.), 1894 (*Geol. Mag.* (4) **1** : 361) : *Ammonites scipionianus* d'Orbigny, 1844, *Pal. française*, Terr. jurass. : 207, pl. 51, figs. 7, 8) (gender of generic name : neuter).
- Angulaticeras** Quenstedt, 1883, *Ammoniten schwäb. Jura* : 26 (type species, by selection by Lange, 1924 (*Jahrb. preuss. geol. Landesanst.* **44** : 176) : *Ammonites lacunatas* Buckman (J.), 1844, *Geol. Cheltenham* : 105) (gender of generic name : neuter).
- Asteroceras** Hyatt, 1866, *Bull. Mus. comp. Zool.* **3** : 78, 80 (type species, by selection by Buckman (S.), 1911 (*Type Ammonites* **1** : v) : *Ammonites stellaris* Sowerby (J.), 1815, *Min. Conch.* **1** : 211, pl. 93) (gender of generic name : neuter).
- Bigotites** Nicolesco, 1918, *C. R. Sommaire Soc. géol. France* (4) **18** : 36 (type species, by selection by Nicolesco, 1931 (*Mém. Soc. géol. France* **17** : 23) : *Bigotella petri* Nicolesco, 1917, *Bull. Soc. géol. France* (4) **16** : 167, pl. 4, figs. 4, 5) (gender of generic name : masculine).
- Cadoceras** Fischer, 1882, *Manuel Conchyl.* : 394 (type species by selection by Arkell in the present application : *Ammonites sublaevis* Sowerby (J.), 1814, *Min. Conch.* **1** : 117, pl. 54) (gender of generic name : neuter).
- Cadomites** Munier-Chalmas, 1892, *Bull. Soc. géol. France* (3) **20** C. R. : clxx (type species, by original designation : *Ammonites deslongchampsii* (DeFrance MS) d'Orbigny, 1846, *Pal. française*, Terr. jurass. : 405, pl. 138, figs. 1, 2) (gender of generic name : masculine).
- Coroniceras** Hyatt, 1867, *Bull. Mus. comp. Zool.* **3** : 77 (type species, by selection by Bonarelli, 1900 (*Pal. ital.* **5** : 58) : *Ammonites kridion* Hehl, in Zieten, [1830], *Verstein. Württemb.* (1) : 4, pl. 3, fig. 2) (gender of generic name : neuter).

- Echioceras** Bayle, 1878, *Explic. Carte géol. France* **4** : explic. pl. 77, figs. 2, 3 (type species, by monotypy : *Ammonites raricostatus* Zieten, [1831], *Verstein. Württemb.* (3) : 18, pl. 13, fig. 4) (gender of generic name : neuter).
- Garantiana** Mascke, 1907, *Die Stephanoceras-Verwandt. Coronatensch. Nord-deutschl.* : 24, 34 (type species, by original designation : *Ammonites garantianus* d'Orbigny, 1846, *Pal. française*, Terr. jurass. : 377, pl. 123) (gender of generic name : feminine).
- Lamberticeras** Buckman (S.), 1920, *Type Ammonites* **3** : 14, pl. 154 (type species, by original designation : *Ammonites lamberti* Sowerby (J.), 1819, *Min. Conch.* **3** : 73, pl. 242, figs. 1—3) (gender of generic name : neuter).
- Ludwigella** Buckman (S.), 1901, *Proc. Cotteswold Nat. Field Club* **13** : 266 (type species, by monotypy : *Ammonites concavus* Sowerby (J.), 1815, *Min. Conch.* **1** : 214, pl. 94 (holotype refigured by Buckman (S.), 1887, *Mon. Inf. Ool. Ammonites* : pl. 2, figs. 6, 7)) (gender of generic name : feminine).
- Oecostraustes** Waagen, 1869, in Benecke's *Geognost.-Pal. Beiträge* **2** : 251 (type species, by selection by Munier-Chalmas, 1892 (*Bull. Soc. géol. France* (3) **20** C. R. : clxxi) : *Oecotraustes genicularis* Waagen, 1869, in Benecke's *Geognost.-Pal. Beiträge* **2** : 227, pl. 20, figs. 4a—c) (gender of generic name : masculine).
- Oppelia** Waagen, 1869, in Benecke's *Geognost.-Pal. Beiträge* **2** : 200 (type species, by selection by Douvillé (H.), 1884 (*Bull. Soc. géol. France* (3) **13** : 32) : *Ammonites subradiatus* Sowerby (J. de C.), 1823, *Min. Conch.* **5** : 23, pl. 421, fig. 2) (gender of generic name : feminine).
- Phlyseogrammoceras** Buckman (S.), 1901, *Proc. Cotteswold Nat. Field Club* **13** : 266 (type species, by monotypy : *Ammonites dispansus* Lycett, 1860, *Proc. Cotteswold Nat. Field Club* **2** : 146 (holotype refigured by Buckman (S.), 1922, *Type Ammonites* **4** : pl. 340)) (gender of generic name : neuter).
- Pleuroceras** Hyatt, 1867, *Bull. Mus. comp. Zool.* **1** : 89 (type species, by selection by Fischer, 1882 (*Manuel Conchyl.* : 388) : *Ammonites spinatus* Bruguière, 1789, *Ency. méth.* (Vers) : 40) (gender of generic name : neuter).
- Pseudogrammoceras** Buckman (S.), 1901, *Proc. Cotteswold Nat. Field Club* **13** : 266 (type species, by monotypy : *Ammonites struckmanni* Denckmann, 1887, *Fauna Doernten, Abh. geol. Specialkarte Preussen* **8** : 72, pl. iii, fig. 1) (gender of generic name : neuter).
- Pseudoperisphinctes** Schindewolf, 1923, *Centralbl. Min.* **23** : 346 (type species, by monotypy : *Perisphinctes rotundatus* Roemer (J.), 1911, *Fauna Aspidoides-Schichten Lechstedt*, Inaug.-Dissert. Göttingen : 44, pl. 8, fig. 2, as defined by the selection of a lectotype by Arkell, 1950 (*J. Palaeont.* **24** : 363)) (gender of generic name : masculine).

- Psiloceras** Hyatt, 1867, *Bull. Mus. comp. Zool.* **3** : 72 (type species, by selection by Spath, 1924 (*Proc. geol. Assoc.* **35** : 191) : *Ammonites planorbis* Sowerby (J. de C.), 1824, *Min. Conch.* **5** : 69, pl. 448, fig. 1) (gender of generic name : neuter).
- Quenstedtoceras** (emend. of *Quenstedioceras*) Hyatt, 1877, *Proc. Boston nat. Hist. Soc.* **18** : 391 (type species, by monotypy : *Ammonites leachi* Sowerby (J.), 1819, *Min. Conch.* **3** : 73, pl. 242, fig. 4) (gender of generic name : neuter).
- Sigaloceras** Hyatt, 1900, in Eastman's Zittel, *Textb. Pal.* **1** : 587 (type species, by original designation : *Ammonites calloviensis* Sowerby (J.), 1815, *Min. Conch.* **2** : 3, pl. 104) (gender of generic name : neuter).
- Stephanoceras** Waagen, 1869, in Benecke's *Geognost.-Pal. Beiträge* **2** : 248 (type species, by selection by Buckman (S.), 1898 (*Quart. J. geol. Soc.* **54** : 454) : *Ammonites humphriesianus* Sowerby (J. de C.), 1825, *Min. Conch.* **5** : 161, pl. 500, fig. 1) (gender of generic name : neuter).

5. The trivial names of the type species of the genera specified in the preceding paragraph are all valid names, and each is the oldest available name for the species concerned. It is recommended that these trivial names, as listed below, should now be placed on the *Official List of Specific Trivial Names in Zoology*:—

Names recommended for addition to the "Official List of Specific Trivial Names in Zoology"

- calloviensis** Sowerby (J.), 1815, *Min. Conch.* **2** : 3, pl. 104, as published in the binominal combination *Ammonites calloviensis*.
- concaus** Sowerby (J.), 1815, *Min. Conch.* **1** : 214, pl. 94, as published in the binominal combination *Ammonites concaus*.
- deslongchampsii** (Defrance MS), d'Orbigny, 1846, *Pal. française*, Terr. jurass. : 405, pl. 138, figs. 1, 2, as published in the binominal combination *Ammonites deslongchampsii*.
- dispansus** Lycett, 1860, *Proc. Cotteswold Nat. Field Club* **2** : 146, as published in the binominal combination *Ammonites dispansus*.
- garantianus** d'Orbigny, 1846, *Pal. française*, Terr. jurass. : 377, pl. 123, as published in the binominal combination *Ammonites garantianus*.
- genicularis** Waagen, 1869, in Benecke's *Geognost.-Pal. Beiträge* **2** : 227, pl. 20, figs. 4a—c, as published in the binominal combination *Oecotraustes genicularis*.
- humphriesianus** Sowerby (J. de C.), 1825, *Min. Conch.* **5** : 161, pl. 500, fig. 1, as published in the binominal combination *Ammonites humphriesianus*.

- kridion** Hehl in Zieten, [1830], *Verstein. Württemb.* (1) : 4, pl. 3, fig. 2, as published in the binominal combination *Ammonites kridion*.
- lacunatus** Buckman (J.), 1844, *Geol. Cheltenham* : 105, as published in the binominal combination *Ammonites lacunatus*.
- lamberti** Sowerby (J.), 1819, *Min. Conch.* 3 : 73, pl. 242, figs. 1—3, as published in the binominal combination *Ammonites lamberti*.
- leachi** Sowerby (J.), 1819, *Min. Conch.* 3 : 73, pl. 242, fig. 4, as published in the binominal combination *Ammonites leachi*.
- petri** Nicolesco, 1917, *Bull. Soc. géol. France* (4) 16 : 167, pl. 4, figs. 4, 5, as published in the binominal combination *Bigotella petri*.
- planorbis** Sowerby (J. de C.), 1824, *Min. Conch.* 5 : 69, pl. 448, fig. 1, as published in the binominal combination *Ammonites planorbis*.
- raricostatus** Zieten, [1831], *Verstein. Württemb.* (3) : 18, pl. 13, fig. 4, as published in the binominal combination *Ammonites raricostatus*.
- rotundatus** Roemer (J.), 1911, *Fauna Aspidoides-Schichten Lechstedt*, Inaug. Dissert. Göttingen : 44, pl. 8, fig. 2, as published in the binominal combination *Perisphinctes rotundatus*.
- scipionianus** d'Orbigny, 1844, *Pal. française*, Terr. jurass. : 207, pl. 51, figs. 7, 8, as published in the binominal combination *Ammonites scipionianus*.
- spinatus** Bruguière, 1789, *Ency. méth.* (Vers) : 40, as published in the binominal combination *Ammonites spinatus*.
- stellaris** Sowerby (J.), 1815, *Min. Conch.* 1 : 211, pl. 93, as published in the binominal combination *Ammonites stellaris*.
- struckmanni** Denckmann, 1887, *Fauna Doernten, Abh. geol. Specialkarte Preussen* 8 : 72, pl. 3, fig. 1, as published in the binominal combination *Ammonites struckmanni*.
- sublaevis** Sowerby (J.), 1814, *Min. Conch.* 1 : 117, pl. 54, as published in the binominal combination *Ammonites sublaevis*.
- subradiatus** Sowerby (J. de C.), 1823, *Min. Conch.* 5 : 23, pl. 421, fig. 2, as published in the binominal combination *Ammonites subradiatus*.

6. The recommendations which I therefore now submit to the International Commission on Zoological Nomenclature are that it should :—

(1) declare that under Article 19 :—

- (a) the correct spelling of the generic name published by Waagen in 1869 both as *Oecotraustes* and as *Oekotraustes* is *Oecotraustes*;

- (b) the correct spelling of the generic name published by Hyatt in 1877 as *Quenstedioceras* is *Quenstedtoceras*;
- (2) place on the *Official List of Generic Names in Zoology* the twenty-one generic names specified in paragraph 4 of the present application ;
- (3) place on the *Official List of Specific Trivial Names in Zoology* the twenty-one trivial names specified in paragraph 5 of the present application ;
- (4) place the under-mentioned names or alleged names on the *Official Index of Rejected and Invalid Generic Names in Zoology*:—
- (a) *Bourkelamberticeras* Buckman (S.), 1920 (an objective junior synonym of *Lamberticeras* Buckman (S.), 1920) ;
 - (b) *Garantia* Rollier, 1909 (an unjustified emendation of *Garantiana* Mascke, 1907) ;
 - (c) *Garantiana* Hyatt, 1900 (a *nomen nudum*) ;
 - (d) *Lamberticeras* Kilian, 1910 (a *nomen nudum*) ;
 - (e) *Oekotraustes* Waagen, 1869 (an erroneous spelling of *Oecotraustes* Waagen, 1869) ;
 - (f) *Paltoptleuroceras* Buckman (S.), 1898 (an objective junior synonym of *Pleuroceras* Hyatt, 1867) ;
 - (g) *Quenstedticeras* Teisseyre, 1889 (an incorrect emendation of the defective form, *Quenstedioceras*, in which the name *Quenstedtoceras* was originally published) ;
 - (h) *Quenstedioceras* Hyatt, 1877 (an erroneous spelling of *Quenstedtoceras* Hyatt, 1877) ;
 - (i) *Stepheoceras* Buckman (S.), 1898 (an objective junior synonym of *Stephanoceras* Waagen, 1869).

APPENDIX

Explanatory notes regarding certain of the generic names proposed to be added to the " Official List of Generic Names in Zoology "

The sign * prefixed before the name of a genus indicates that the type species of that genus has been used as a zonal index fossil and is therefore of special importance in stratigraphy.

* *Agassiceras* Hyatt, 1875 : Although in 1894 he had selected *Ammonites scipionianus* d'Orbigny, 1844, as the type species of this genus, Buckman (S.) later (1909, *Type Ammonites* 1 : ii) sought to change the type species of this genus to *Ammonites striaries* Quenstedt,

1858. See also Buckman, 1924, *op. cit.* 5 : 33. Roman (1938, *Ammonites jurass. crét.* : 102) wrongly gave *Ammonites laevigatus* Sowerby (J. de C.), 1827, as the type species.

Angulaticeras Quenstedt, 1883 : The only originally included species in this genus were *Ammonites lacunatus* Buckman (J.), 1844, and *Ammonites boucaultianus* d'Orbigny, 1844. Buckman (S.) in 1906 (*Proc. Cotteswold Nat. Field Club* 15 : 233) selected as typical of this genus "the group of *Am. lacunatas* Quenstedt". This cannot be accepted as the selection of a type species under Rule (g) in Article 30 "rigidly construed". Accordingly, the first valid type-selection for this genus is that cited in the present application, namely that by Lange (1924).

* *Asteroceras* Hyatt, 1866 : As stated in the application, the first type-selection for this genus was that of *Ammonites stellaris* Sowerby (J.), 1815, by Buckman (1911). Roman, 1938 (*Ammonites jurass. crét.* : 91) was therefore in error when he stated that *Ammonites obtusus* Sowerby (J.), 1817, was the type species.

Bigotites Nicolesco, 1918 : Roman (overlooking the action by Nicolesco in 1931) erroneously stated (1938, *Ammonites jurass. crét.* : 240) that *Bigotella haugi* Nicolesco, 1917, was the type species of this genus.

Cadoceras Fischer, 1882 : Fischer cited as sole species of this genus, the pre-1758 name *Nautilites modiolaris* Luidius, 1699 (*Lithophyl. Brit.* : 18, pl. vi, fig. 292), which has commonly been treated by authors as applying to the same species as *Ammonites sublaevis* Sowerby (J.), 1814. The first author to cite nominal species under the generic name *Cadoceras* Fischer appears to have been Nikitin (1884, *Cephalopodenfauna der Jurabildungen des Gouv. Kostroma* : 21), who after stating incorrectly that the generic name *Cadoceras* was chosen by Fischer for *Am. sublaevis* and similar forms of *Stephanoceras* described three species as belonging to this genus and mentioned several others. Under the decision taken by the Thirteenth International Congress of Zoology, when incorporating in the *Règles* a clarified and amended version of the ruling previously given by the Commission in *Opinion* 46 (see 1950, *Bull. zool. Nomencl.* 4 : 159—160, 340), the nominal species cited by Nikitin are alone eligible for selection as the type species of *Cadoceras*. Fortunately, as shown above, *Ammonites sublaevis* Sowerby, which is commonly regarded as representative of *Cadoceras* (through its identification with the *modiolaris* of Luidius) was one of the species cited by Nikitin and is therefore eligible for selection as the type species of this genus. Neither Nikitin nor Pompeckj (1899) nor any subsequent author has, so far as I can ascertain, ever selected a type species for *Cadoceras* Fischer. Accordingly, in order to regularise existing practice, I have now (: 224) selected *Ammonites sublaevis* Sowerby, 1814 (= *Cadoceras sublaeve* (Sowerby (J.), 1814)) to be the type species of *Cadoceras* Fischer, 1882.

Cadomites Munier-Chalmas, 1892 : This generic name has been wrongly used in many French works for the genus, the correct name of which is *Stephanoceras* Waagen, 1869 (q.v.). The lectotype of *Ammonites deslongchampsii* d'Orbigny, 1846 (the type species of this genus) was refigured in 1909 (*Palaeont. univ.* 1909 : pl. 132).

Coroniceras Hyatt, 1867 : As stated in the present application, Bonarelli in 1900 selected *Ammonites kridion* Hehl, 1830, as the type species of this genus. The later action by Buckman (S.) (1911, *Type Ammonites* 1 : vi) in so selecting *Ammonites coronaries* Quenstedt, 1858, was therefore invalid. It has however, led to some misuse of the generic name *Coroniceras*.

* *Echioceras* Bayle, 1878 : The type species of this genus is (as stated in the present application) *Ammonites raricostatus* Zieten, [1831], by monotypy. Buckman (S.) (1914, *Type Ammonites* 2 : ix) was therefore in error when he stated that the type species was *Echioceras raricostatoides* Vadasz, 1908, this being the name of the species erroneously figured by Bayle as *Echioceras rarecostatum* [sic] (Zieten). This action by Buckman has led to some confusion in later works.

* *Ludwigella* Buckman (S.), 1901 : Although the type species of this genus is *Ammonites concavus* Sowerby (J.), 1815, by monotypy, Buckman twice later attempted invalidly to change the type species (1904, *Mon. Inf. Ool. Amm.*, Suppl. : lxxxiv ; 1923, *Type Ammonites* 4 : 56).

Oppelia Waagen, 1869 : The type species of this genus is (as stated in the present application) *Ammonites subradiatus* Sowerby (J. de C.), 1823, by selection by Douvillé (H.) in 1884. The later action by Buckman (S.) (1920, *Type Ammonites* 3 : 25) in selecting one of Waagen's figured specimens as "genolectype" was therefore invalid.

* *Phlyseogrammoceras* Buckman (S.), 1901 : Although (as stated in the present application) the type species of this genus is *Ammonites dispansus* Lycett, 1860, Buckman (S.) erroneously attempted (1904, *Mon. Inf. Ool. Amm.*, Suppl. : cliv) to change the type species to *Ammonites metallarius* Dumortier, 1874.

* *Pseudogrammoceras* Buckman (S.), 1901 : This is another monotypical genus (type species : *Ammonites struckmanni* Denckmann, 1887), the type species of which Buckman later (1904, *Mon. Inf. Ool. Amm.*, Suppl. : cxliii) attempted incorrectly to alter.

* *Pseudoperisphinctes* Schindewolf, 1923 : This case is similar to that of *Pseudogrammoceras*, Schindewolf in 1925 (*Neues Jahrb. für Min.* 1925 : 319) attempting to alter the type species.

* *Psiloceras* Hyatt, 1867 : Buckman (S.) (1924, *Type Ammonites* 5 : 34) criticised Spath's action in the same year in selecting *Ammonites planorbis* Sowerby (J. de C.), 1824, and erroneously rejected that action, arguing that *Ammonites psilonotus* Quenstedt, 1845, was the type species by virtual tautonymy.

* *Sigaloceras* Hyatt, 1900 : This is a case where the original author of the generic name designated a type species, citing, for this purpose, a specific name (*Ammonites calloviensis*) previously published by Sowerby (J.) in 1815, but attributing it to another author (d'Orbigny). The specimens treated by d'Orbigny as belonging to Sowerby's species have not yet been examined and it is therefore not known whether they were correctly determined. In any case, authors have treated Sowerby's species as being the type species of this genus (thereby conforming to the requirements of *Opinions* 65 and 168, the decisions in which were confirmed by the Thirteenth International Congress of Zoology in Paris in 1948—see *Bull. zool. Zool.* 4 : 158—159). Accordingly, there are in this case no grounds for asking the International Commission to change the type species.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On receipt of Dr. Arkell's application, the question of adding a block of generic names of ammonites to the *Official List of Generic Names in Zoology* was allotted the Registered Number Z.N.(S.) 477.

3. Publication of the present application : The present application was sent to the printer in March 1951 and it was published on 4th May 1951 in Triple-Part 6/8 of volume 2 of the *Bulletin of Zoological Nomenclature* (Arkell, 1951, *Bull. zool. Nomencl.* 2 : 224—233).

4. Support received for the present application : The publication of Dr. Arkell's application in the *Bulletin of Zoological Nomenclature* elicited support from the following specialists :—(a) Dr. D. T. Donovan (*University of Bristol, Department of Geology, Bristol*), (b) the Joint Committee on Zoological Nomenclature for Paleontology in America.

5. Support received from Dr. D. T. Donovan (University of Bristol, Department of Geology, Bristol) : In a letter dated 28th May 1951, which was mainly concerned with other applications submitted by Dr. Arkell in regard to the names of ammonites, Dr. D. T. Donovan (*University of Bristol, Department of Geology, Bristol*) indicated his support as follows for the present application :—" Bull., vol. 2, p. 224. *Addition of names to the " Official List "* (Z.N.(S.) 477). I propose to employ such of these names as concern my own work in their properly defined sense, as given by Dr. Arkell ".

6. Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America : On 9th April 1952 there was received a large number of letters commenting on various applications previously published in the *Bulletin of Zoological Nomenclature* from Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America. Included among these was a letter, reporting that the Committee supported the present application by nine votes to one. The foregoing letter was dated 18th February 1952, and its late receipt was apparently due to a decision to defer the despatch to the Commission of the letters containing comments by members of the Joint Committee until all the letters in question had been prepared. By the date on which this letter was received, the Prescribed Period of Public Notice had expired and the Voting Paper (V.P.(52)29) had been prepared. It was therefore impossible to include in that Voting Paper a reference to Professor Sinclair's letter, but, when the Voting Paper was despatched (on 24th April), a supplementary sheet containing the particulars furnished by Professor Sinclair was issued to the Members of the Commission, who were thus placed in possession of the views of the members of the Joint Committee at the same time that they received the Voting Paper relating to the present case. The following is the text of Professor Sinclair's letter :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject and I wish to inform you that, being polled, they voted : To support the petition (nine) :—(1) Katherine V. W. Palmer ; (2) A. Myra Keen ; (3) Siemon W. Muller ;

(4) John B. Reeside, Jr. ; (5) Don L. Frizzell ; (6) J. Marvin Weller ; (7) Bryan Patterson ; (8) Bobb Schaeffer ; (9) G. Winston Sinclair. To oppose the petition (one) :—John W. Wells.

In voting to support the petitions some members of the committee made it clear that their support was based on an assumption that the brief as presented was correct. Mrs. Palmer thinks that the authorship of *Pleuroceras* was wrongly ascribed in the published brief.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

7. Issue of Voting Paper V.P.(52)29 : On 24th April 1952, a Voting Paper (V.P.(52)29) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal for “ the *Official Lists* and *Official Indexes* of certain ammonite names and matters incidental thereto, as specified in Points (1) to (4) in paragraph 6 on page 230 of volume 2 of the *Bulletin of Zoological Nomenclature* [i.e. in paragraph 6 of the application reproduced in the first paragraph of the present *Opinion*].

8. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 24th July 1952.

9. Particulars of the Voting on Voting Paper V.P.(52)29 : The state of the voting on Voting Paper V.P.(52)29 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following seventeen (17) Commissioners (arranged in the order in which Votes were received):*

Calman ; Hering ; Dymond ; Esaki ; do Amaral ; Hankó ; Bonnet ; Lemche ; Vokes ; Cabrera ; Pearson ; Boschma ; Stoll ; Bradley ; Hemming ; Mertens ; Riley ;

(b) *Negative Votes:*

None ;

(c) *Voting Paper not returned, one (1) :*

Jaczewski.

10. Declaration of Result of Vote : On 25th July 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)29, signed a Certificate that the Votes cast were as set out in paragraph 9 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

11. Receipt of additional information regarding the selection of a type species for the nominal genus " Cadoceras " Fischer, 1882 : On 25th March 1954, Dr. W. J. Arkell (the applicant in the present case) reported to the Commission that he had now ascertained that in 1932 Spath (L.F.) had published a statement that *Ammonites sublaevis* Sowerby (J.), 1814, was the type species of the nominal genus *Cadoceras* Fischer, 1882, and therefore that the selection so made anticipated the selection of the same species made by himself in his own application to the Commission. The information so received from Dr. Arkell was reported to the Commission by the Secretary in the following memorandum which was issued on 3rd April 1954 :—

Case of the generic name " Cadoceras " Fischer, 1882

By FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

Among the generic names of ammonites which Dr. W. J. Arkell recommended should be placed on the *Official List of Generic Names in Zoology* (1951, *Bull. zool. Nomencl.* 2 : 224—233) was the name *Cadoceras* Fischer, 1882. The use of this name was well established, but at that time Dr. Arkell had been unable to find in the literature that any previous author had formally selected a type-species for this genus under Rule (g) in Article 30. Accordingly, in the application to the Commission he himself selected *Ammonites sublaevis* Sowerby

(J.), 1814, to be the type species of this genus, thus fixing this generic name for use in its accustomed sense. Dr. Arkell's proposals for the addition of this, and of a number of other, well-known generic names of ammonites to the *Official List* were put to the Commission in 1952 in Voting Paper (52)29. As the result of this vote, these proposals were unanimously approved by the Commission.

2. I have recently been engaged in preparing the *Opinion* required to give effect to the foregoing decision and I have been in correspondence in regard to it with Dr. Arkell. I have now been informed by Dr. Arkell that he has found that, contrary to his belief at the time when he submitted his application, there was already a valid type selection for the foregoing nominal species, namely, by Spath (L.F.) (1932, *Meddelelser om Grønland* 87 (No. 7) : 58), who had selected the same species to be the type species of *Cadoceras*.

3. In these circumstances, it will be necessary in the *Opinion* to be rendered in this case to substitute "Spath (1932)" for "Arkell (1951)" as the reference to the author by whom the type selection for the above genus was first validly made. As no question of principle is involved and we are concerned here only with making a small correction on a question of fact, I might not have considered it necessary to resubmit this case to the Commission, but I am doing so now, because it is necessary also to submit one or two other matters, and I feel that this provides a convenient opportunity for bringing this particular matter to notice.

12. Issue of Voting Paper V.P.(O.M.)(54)2 : Simultaneously with the submission to the Commission on 3rd April 1954 of the memorandum reproduced in the immediately preceding paragraph, a Voting Paper (V.P.(O.M.)(54)2 was issued in which the Members of the Commission were invited to sign the following statement :—

I take note that the type selection for the nominal genus *Cadoceras* Fischer, 1882, by Spath (L.F.) in 1932 of *Ammonites sublaevis* Sowerby (J.), 1814, takes precedence over the selection of the same species by Arkell (1951) the selection stated to be first valid type selection in the application approved by the Commission in its Vote on Voting Paper V.P.(52)29 ; I accordingly agree that the Secretary be authorised and requested to make the foregoing correction when preparing the *Opinion* required to give effect to the decision referred to above.

13. The Prescribed Voting Period for the Voting on Voting Paper V.P.(O.M.)(54)2 : As the foregoing Voting Paper was issued under the One-Month Rule, the Prescribed Voting Period closed on 3rd May 1954.

14. Particulars of the Voting on Voting Paper V.P.(O.M.)(54)2 :
The state of the voting on Voting Paper V.P.(O.M.)(54)2 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following seventeen (17) Commissioners (arranged in the order in which Votes were received)*¹ :

Holthuis ; Lemche ; Vokes ; Hering ; Sylvester-Bradley ;
Bonnet ; Dymond ; Mertens ; Cabrera ; Riley ; Esaki ;
Stoll ; Pearson ; Hemming ; Jaczewski ; Bradley (J.C.) ;
Boschma ;

(b) *Negative Votes:*

None ;

(c) *Voting Papers not returned, two (2)*² :

do Amaral ; Hankó.

15. Declaration of Result of Vote on Voting Paper V.P.(O.M.)(54)2 : On 4th May 1954, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(O.M.)(54)2, signed a Certificate that the Votes cast were as set out in paragraph 14 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

16. On 4th May 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those

¹ The following zoologists who were Members of the International Commission at the time of the issue of Voting Paper V.P.(O.M.)(54)2 were not Members of the Commission at the time of the issue of Voting Paper V.P.(52)29 :—

Mr. P. C. Sylvester-Bradley (*Sheffield University, Sheffield, England*)

Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*).

² After the close of the Prescribed Voting Period, affirmative votes were received from Commissioners do Amaral and Hankó.

of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)29, as amended, in respect of the name *Cadoceras* Fischer, 1882, by its Vote on Voting Paper V.P.(O.M.)(54)2.

17. The original references for the names placed on the *Official List of Generic Names in Zoology* and the *Official List of Specific Names in Zoology* by the Ruling given in the present *Opinion* are as set out in paragraphs 4 and 5 respectively in the application reproduced in the first paragraph of the present *Opinion*.

18. The references for the type selections for the nominal genera, the names of which are added to the *Official List* by the Ruling given in the present *Opinion*, are as set out in paragraph 4 of the application, save as respects the type selection for the nominal genus *Cadoceras* Fischer, 1882. As explained in paragraph 11 of the present *Opinion*, the nominal species *Ammonites sublaevis* Sowerby (J.), 1814, is, as stated in the application, the type species of the foregoing nominal genus, but it was first validly selected as such not by Dr. Arkell in the application which forms the subject of the present *Opinion* but by Spath (L.F.) in 1932 (*Meddelelser om Grønland* 87 (No. 7) : 58).

19. The original references for the names or alleged names placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* by the Ruling given in the present *Opinion* are as follows :—

Bourkelamberticeras Buckman (S.), 1920, *Type Ammonites* 3 : 17
Garantia Rollier, 1909, *Arch. Sci. phys. nat. Genève* (4) 28 : 613,
 615

Garantiana Hyatt, 1900, in Eastman's Zittel, *Textb. Paleont.*
 1 : 583

Lamberticeras Kilian, 1910, *Lethaea geognostica* 3 (No. 1) (Lief 2) :
 194

Oekotraustes Waagen, 1869, *Geogn.-pal. Beitr.* 2 (Heft 2) : 251

Paltopleuroceras Buckman (S.), 1898, *Quart. J. geol. Soc.* 54 : 453

Quenstedticeras Teisseyre, 1889, *Neues Jahrb. für Min. Beil.-Band*
 6 : 148

Quenstedioceras Hyatt, 1877, *Proc. Boston nat. Hist. Soc.* 18 : 39

Stepheoceras Buckman (S.), 1898, *Quart. J. geol. Soc.* 54 : 454

20. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(S.) 864 has been allotted.

21. At the time of the submission of the application dealt with in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

22. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

23. The present *Opinion* shall be known as *Opinion* Three Hundred and Twenty-Four (324) of the International Commission on Zoological Nomenclature.

DONE in London, this Fourth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

**OPINIONS AND DECLARATIONS
RENDERED BY THE INTER-
NATIONAL COMMISSION ON
ZOOLOGICAL NOMENCLATURE**

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

VOLUME 9. Part 16. Pp. 251—266

OPINION 325

Validation, under the Plenary Powers, of the generic
name *Modiolus* Lamarck, 1799 (Class Pelecypoda)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 325

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 325

VALIDATION, UNDER THE PLENARY POWERS, OF THE GENERIC NAME "MODIOLUS" LAMARCK, 1799 (CLASS PELECYPODA)

RULING : (1) Under the Plenary Powers, (a) the generic name *Volsella* Scopoli, 1777, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy, and (b) the generic name *Modiolus* Lamarck, 1799 (Class Pelecypoda) is hereby validated.

(2) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* as Name Nos. 791 and 792 respectively :—(a) *Modiolus* Lamarck, 1799, as validated, under the Plenary Powers, under (1)(b) above (gender : masculine) (type species, by absolute tautonymy : *Mytilus modiolus* Linnaeus, 1758) ; (b) *Vulsella* Röding, 1798 (gender : feminine) (type species, by absolute tautonymy : *Mya vulsella* Linnaeus, 1758).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 226 and 227 respectively :—(a) *modiolus* Linnaeus, 1758, as published in the combination *Mytilus modiolus* (specific name of type species of *Modiolus* Lamarck, 1799) ; (b) *vulsella* Linnaeus, 1758, as published in the combination *Mya vulsella* (specific name of type species of *Vulsella* Röding, 1798).

(4) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name Nos. 198 to 202 respectively :—(a) *Modiola* Lamarck, 1801 (a junior

objective synonym of *Modiolus* Lamarck, 1799); (b) *Volsella* Scopoli, 1777, as suppressed, under the Plenary Powers, under (1)(a) above; (c) *Volsella* Modeer, 1793 (a junior homonym of *Volsella* Scopoli, 1777); (d) *Vulsella* [Humphreys], 1797 (a name published in a work rejected for nomenclatorial purposes (*Opinion* 51)); (e) *Vulsella* Lamarck, 1799 (a junior homonym of *Vulsella* Röding, 1798).

I.—THE STATEMENT OF THE CASE

In March 1946 Dr. Joshua L. Baily, Jr. (*San Diego, California, U.S.A.*) submitted an application asking for a Ruling regarding the status to be accorded to the generic name *Modiolus* Lamarck, 1799, in relation to its senior synonym *Volsella* Scopoli, 1777. For the reasons explained in paragraph 4 of the present *Opinion* it was necessary at a later stage somewhat to revise the form of the foregoing application. The application so revised was as follows :—

**Proposed use of the Plenary Powers to validate the generic name
“*Modiolus*” Lamarck, 1799, by suppressing the generic name
“*Volsella*” Scopoli, 1777 (Class Pelecypoda) and matters
incidental thereto**

By JOSHUA L. BAILY, Jr.,
(*San Diego, California, U.S.A.*)

1. The object of the present application is to ask the International Commission on Zoological Nomenclature to use its Plenary Powers to suppress the generic name *Volsella* Scopoli, 1777 (*Introd. Hist. nat.* : 397) (Class Pelecypoda) and thereby forestall the serious confusion which the resuscitation of this long-neglected name would inevitably cause. This confusion would be of a peculiarly aggravated character, for the acceptance of the name *Volsella* Scopoli, 1777, would not only lead to the disappearance into synonymy of the well-known name *Modiolus* Lamarck, 1799 (*Mém. Soc. Hist. nat. Paris*, 1799 : 87) but would also make it necessary to employ in the Class Pelecypoda two generic names (*Volsella* Scopoli, 1777, and *Vulsella* Röding, 1798 (*Mus. bolten.* (2) : 156)) so similar to one another that confusion would

be quite unavoidable. This latter consideration is all the more important, in view of the fact that species of both these genera may occur in the same strata.

2. The genus *Modiolus* Lamarck, 1799, has, as its type species, *Mytilus modiolus* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) 1 : 706), by absolute tautonymy. The name *Modiolus* Lamarck has been in almost universal use for this genus for the past twenty-five years, while, prior to that, the same name in the invalid (because later published) variant form *Modiola* Lamarck, 1801 (*Syst. Anim. sans Vertèbr.* : 113) (with the same type species) had been in general use for upwards of a century. This name is therefore deeply entrenched in the literature and very well known to all students of this group. The abandonment of this name on no more than technical nomenclatorial grounds would therefore be open to very strong objection.

3. The name *Volsella* Scopoli, 1777, was published as the name of a genus to which three nominal species were assigned. The first of these species, *Mytilus modiolus* Linnaeus, 1758, was selected as the type species of this genus by Gray in 1847 (*Proc. zool. Soc. Lond.* 15 (178): 198). The nominal genera *Volsella* Scopoli, 1777, and *Modiolus* Lamarck, 1799, are thus objectively identical with one another, each having the same species as its type species. The name *Modiolus* Lamarck is accordingly invalid, being a junior objective synonym of *Volsella* Scopoli, 1777.

4. In spite of the undoubted priority which it possesses over the name *Modiolus* Lamarck (and its variant *Modiola* Lamarck), the name *Volsella* Scopoli never won any acceptance for itself, even after Gray (1847) had clearly defined the content of this genus by selecting a type species for it. Some authors rejected this name on the ground that in the *Introd. Hist. nat.*, in which it was first published, Scopoli did not satisfy the requirements of Proviso (b) to Article 25 of the *Règles*, i.e. on the ground that in this work Scopoli did not apply the principles of (formerly "binary", now) binominal nomenclature (see 1950, *Bull. zool. Nomencl.* 4 : 63—66); other authors have merely ignored the name *Volsella* Scopoli; others again have argued that this generic name cannot properly be used for *Mytilus modiolus* Linnaeus, since the shell of that species has an edentulous hinge, although Scopoli erected the genus *Volsella* for the denticulate species placed by Linnaeus in his genus *Mytilus*, while leaving in that genus the edentulous species. Those authors who have advanced this argument have concluded either that Scopoli, when introducing his new genus *Volsella*, misidentified some other species with *Mytilus modiolus* Linnaeus, when he cited that species as belonging to his new genus or that, if Scopoli did not actually make a misidentification, he included the above species in *Volsella* in error through having misunderstood its characters.

5. Neither the foregoing argument against the acceptance of the generic name *Volsella* Scopoli, 1777, nor that against the acceptance of *Mytilus modiolus* Linnaeus, 1758, as the type species of that genus can be accepted as having any validity under the *Règles*. The first of these arguments is completely disposed of by the decision taken by the International Congress of Zoology in 1948, with reference to Brünnich's *Zoologiae Fundamenta* of 1771 (a work which, like Scopoli's *Introductio*, was primarily concerned with classification down to the genus level but no further) that a generic name published in such a work is not to be rejected on the ground that in it the author did not comply with the requirements of Proviso (b) to Article 25, provided that it is evident (as it is in the case both of Brünnich's and Scopoli's books) that the author concerned would have applied the principles of binominal nomenclature if in the book concerned he had dealt with taxonomic units below the genus level (1950, *Bull. zool. Nomencl.* 4 : 307—310).¹ The second of the arguments discussed above is shown to be fallacious by the decision taken by the Congress that the original author of a genus is to be deemed to have correctly identified the species referred by him thereto, except where the International Commission is satisfied that an error of identification was committed by the original author of the genus and is of the opinion that greater confusion than uniformity would result if the species represented by the nominal species in question were to be accepted as the type species of the genus (1950, *Bull. zool. Nomencl.* 4 : 158—159).

6. It is clear therefore that, as argued by Dr. Ralph B. Stewart in 1939 (*Acad. nat. Sci. Philad. Spec. Publ.* 3 : 98), no technical objection can be established against the name *Volsella* Scopoli, 1777, and in consequence that, as that nominal genus has the same type species (*Mytilus modiolus* Linnaeus, 1758) as the nominal genus *Modiolus* Lamarck, 1798, it must, under the *Règles*, replace the name *Modiolus* Lamarck. It does not follow, however, from this conclusion that the use of the name *Modiolus* Lamarck must be abandoned in favour of the long-neglected and confusing name *Volsella* Scopoli, 1777, for ever since 1913 the International Commission on Zoological Nomenclature has been clothed by the International Congress of Zoology with Plenary Powers to suspend the operation of the normal Rules in cases where it is satisfied that otherwise greater confusion than uniformity will result. For nearly forty years therefore there has been a means by which in cases of the foregoing type the strict application of the *Règles* may be officially waived. The position in this matter was emphasised in 1948 by the decision of the Congress to incorporate the provisions relating to the Plenary Powers into the *Règles* in the revision which it was then decided to make. For the reasons set out

¹ Since this passage was written, the Commission has given a Ruling that Scopoli complied with the requirements of Article 25 of the *Règles* in his *Introductio ad Historiam naturalem* and has placed the title of that work on the *Official List of Works Approved as Available for Zoological Nomenclature*. See *Opinion* 329 (pp. 309—320 in the present volume).

in the opening part of the present application the case now under consideration appears pre-eminently to be one which calls for action by the International Commission under its Plenary Powers, if far-reaching and, as regards the concurrent use of the names *Volsella* Scopoli and *Vulsella* Röding, permanent, confusion is to be avoided.

7. I accordingly ask the International Commission to use its Plenary Powers to validate the name *Modiolus* Lamarck, 1799, by suppressing the earlier name *Volsella* Scopoli, 1777. It is important that the suppression of the latter name should be limited to its status under the Law of Priority and should not extend to its status under the Law of Homonymy, since, if the name *Volsella* Scopoli, 1777, were to be suppressed for all purposes, the effect would be to render available as a generic name the word *Volsella* as from the next subsequent occasion on which it was published as the name of a new genus. It is particularly fortunate in the present case that the need for this distinction in those cases where the Plenary Powers are used solely for the purpose of validating some other name of later date has already been recognised by the International Congress of Zoology (1950, *Bull. zool. Nomencl.* 4 : 338—339), since otherwise the suppression of the name *Volsella* Scopoli, 1777, would have conferred availability upon the name *Volsella* Modeer, 1793 (*K. Vetensk. Akad. Nya Handl.*, Stockholm 14 : 179), a name which is at present an invalid junior homonym the resuscitation of which would almost inevitably give rise to a fresh wave of confusion in some other direction.

8. Since part of the object of the present application is to protect the name *Vulsella* Röding, 1798 (a name commonly attributed to Bolten), from the confusion which would be inevitable if within the same Class there were to be also a valid generic name consisting of the word *Volsella* (*Volsella* Scopoli, 1777), it is desirable that the present opportunity should be taken to place the name *Vulsella* Röding, 1798, on the *Official List of Generic Names in Zoology*. The type-species of this nominal genus is *Mya vulsella* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) 1 : 671), by absolute tautonymy.

9. Under the procedural decisions taken by the International Congress of Zoology in 1948 (1950, *Bull. zool. Nomencl.* 4 : 269—271), the trivial names of the species which are respectively the type species of the genera *Modiolus* Lamarck, 1799, and of *Vulsella* Röding, 1789, should now be placed on the *Official List of Specific Trivial Names in Zoology*, as each of these names is considered by specialists to be the oldest available name for the species in question.

10. Finally, the decision taken by the International Commission on Zoological Nomenclature at its Session held in Paris in 1948 that in future each *Opinion* rendered is to deal with all aspects of the problem submitted (1950, *Bull. zool. Nomencl.* 4 : 355) will make it necessary

that in the *Opinion* to be rendered in the present case certain names which are either junior homonyms of, or are junior objective synonyms of, names now proposed to be placed on the *Official List of Generic Names in Zoology* should be finally disposed of by being placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*.

11. The proposal which I now submit is therefore that the International Commission on Zoological Nomenclature should :—

(1) use its Plenary Powers :—

- (a) to suppress for the purposes of the Law of Priority but not for the purposes of the Law of Homonymy the generic name *Volsella* Scopoli, 1777, and
- (b) to validate the name *Modiolus* Lamarck, 1799 ;

(2) place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—

- (a) *Modiolus* Lamarck, 1799, as proposed under (1)(b) above, to be validated under the Plenary Powers (type species, by absolute tautonymy : *Mytilus modiolus* Linnaeus, 1758) ;
- (b) *Vulsella* Röding, 1798 (type species, by absolute tautonymy : *Mya vulsella* Linnaeus, 1758) ;

(3) place the under-mentioned generic, or reputed generic, names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

- (a) *Modiola* Lamarck, 1801 (a junior objective synonym of *Modiolus* Lamarck, 1798) ;
- (b) *Volsella* Scopoli, 1777 (proposed, under (1)(a) above, to be suppressed under the Plenary Powers for the purposes of the Law of Priority but not for the purposes of the Law of Homonymy) ;
- (c) *Volsella* Modeer, 1793 (a junior homonym of *Volsella* Scopoli, 1777) ;
- (d) *Vulsella* [Humphreys], 1797, *Mus. calonn.* : 44 (a name published in a book rejected for nomenclatorial purposes under *Opinion* 51) ;
- (e) *Vulsella* Lamarck, 1799, *Mém. Soc. Hist. nat. Paris* 1799 : 82 (a junior homonym of *Vulsella* Röding, 1798) ;

(4) place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology* :—

- (a) *modiolus* Linnaeus, 1758, as published in the binominal combination *Mytilus modiolus* (trivial name of the type species of *Modiolus* Lamarck, 1799) ;
- (b) *vulsella* Linnaeus, 1758, as published in the binominal combination *Mya vulsella* (trivial name of the type species of *Vulsella* Röding, 1798).

12. I should like, if I may, to express the hope that it will be possible for the International Commission on Zoological Nomenclature to reach a decision on the present application at a very early date, for the genera the names of which form the subject of this application will certainly appear in the forthcoming *Treatise on Invertebrate Paleontology*, which will inevitably be a standard work for many years to come and in which therefore it is particularly desirable that the nomenclature employed should be both correct under the *Règles* and also in harmony with established usage.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On receipt of Dr. Baily's application, the problem of the relative status to be accorded to the generic names *Modiolus* Lamarck, 1799 and *Volsella* Scopoli, 1777, was allotted the Registered Number Z.N.(S.) 213.

3. Postponement of the present application at Paris in 1948 : At the time when the Agenda was being prepared for the Session of the Commission to be held in Paris in 1948 it was evident that the greater part of the time of the Commission at that Session would be required for the consideration of the proposals for the clarification, amendment and expansion of the *Règles* which had been submitted and that the time remaining for the consideration of applications relating to individual names would not be sufficient to permit of decisions being taken on all the applications then awaiting attention. It was inevitable therefore that some of

those applications would need to be postponed. The present was one of the applications which for the foregoing reason was not brought before the Commission at its Paris Session.

4. Revision of the present application in 1951 : A number of the decisions taken by the Thirteenth International Congress of Zoology, Paris, 1948—notably the decisions taken in relation to the placing of names on *Official Lists* and *Official Indexes*—affected the form and scope of *Opinions* to be rendered in future by the Commission and to this extent called for the revision of all applications received prior to that Congress and still awaiting attention. In the period immediately following the Paris Congress the whole of the resources of the Commission were devoted to the preparation and publication of the Official Records of the Proceedings at the Paris Meetings. It was accordingly not until after the publication in 1950 of Volumes 3, 4, and 5 of the *Bulletin of Zoological Nomenclature* (the volumes devoted to the publication of the Paris Records) that it was possible to resume preparations for the publication in the *Bulletin* of applications relating to individual names submitted to the Commission for decision. The revision of the present application in the directions indicated above was undertaken at the beginning of 1951, and was completed on 17th March of that year.

5. Support received, prior to publication, from Dr. L. R. Cox (British Museum (Natural History), London) : While, as explained in the preceding paragraph, the present application was under revision in the early part of 1951, correspondence on certain aspects of this case took place between the Secretary and Dr. L. R. Cox (*British Museum (Natural History), London*) and this led to the submission by Dr. Cox on 21st March 1951 of the following statement supporting Dr. Baily's proposals :—

I strongly support Mr. Joshua L. Baily's application for the suppression of the generic name *Volsella* Scopoli, 1777, for the following reasons.

1. The name has been adopted by only a small handful of authors in comparison with the many who have employed the name *Modiola* Lamarck, 1801, or *Modiolus* Lamarck, 1799, for the genus typified by the well-known living mussel *Mytilus modiolus* Linnaeus, 1758. This

is a most important group both for palaeontologists and neontologists and it is desirable that the name by which it has long been known (whether in the form *Modiola* or the slightly earlier form *Modiolus*) should be stabilized.

2. Scopoli referred three species to *Volsella* when founding the genus, but, of these, *Mytilus modiolus* Linnaeus was the only nominal species, the other two being cited by the pre-Linnean names "Gula Soricis Lister" and "Mytilus L. Aber Adans". *M. modiolus* is thus type species of *Volsella* by monotypy. It is, however, evident that Scopoli based his conception of this species on wrongly determined specimens.

Mytilus modiolus and all species which have been referred to *Modiolus* [vel *Modiola*] differ from *Mytilus* s.str (type species *Mytilus edulis* Linnaeus, 1758) in the absence of hinge-teeth. Scopoli, however, divided his Gens Bivalvia into two groups, "Distributio I" and "Distributio II", the former characterized as "cardine edentato" and the latter as "cardine dentato". He included the genus *Mytilus* (of which he cited no species) in the former and *Volsella* in the latter. Moreover, the generic diagnosis of *Volsella* states "cardo . . . terminant denticuli exigui", and *Mytilus modiolus* Linnaeus, is described by Scopoli as "dente unico". Scopoli's whole treatment of these mussels is, therefore, most confused, and it seems obvious that he did not intend to apply the name *Volsella* to the group familiarly known as *Modiolus* or *Modiola*.

3. *Vulsella* is a very familiar name for a genus of Tertiary and living pelecypods and a family name VULSELLIDAE is derived from it; it is highly desirable that it should be stabilized and placed on the *Official List of Generic Names*.

6. **Publication of the present application** : Dr. Baily's application and Dr. Cox's paper supporting that application were sent to the printer in April 1951 and were published on 28th September 1951 in Part 3 of volume 6 of the *Bulletin of Zoological Nomenclature* (Baily, 1951, *Bull. zool. Nomencl.* 6 : 67—71, Cox, 1951, *ibid.* 6 : 71—72).

7. **Issue of Public Notices** : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given

on 28th September 1951, both in Part 3 of volume 6 of the *Bulletin of Zoological Nomenclature* (the Part in which the application submitted by Dr. Baily was published) and also to the other prescribed serial publications. The publication of these Notices elicited only the statement from the Joint Committee on Zoological Nomenclature for Paleontology in America reproduced in the immediately following paragraph.

8. Views of the Joint Committee on Zoological Nomenclature for Paleontology in America : On 9th April 1952 there was received the following letter, dated 8th February 1952 from Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America, reporting that the present application was supported by six members of the Joint Committee but was opposed by five members :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you that, being polled, they voted : To support the petition (six) :—(1) Katherine V. W. Palmer ; (2) Bryan Patterson ; (3) John B. Reeside, Jr. ; (4) Bobb Schaeffer ; (5) J. Marvin Weller ; (6) R. C. Moore. To oppose the petition (five) :—(1) A. Myra Keen ; (2) Don L. Frizzell ; (3) Siemon W. Muller ; (4) John W. Wells ; (5) G. Winston Sinclair.

Miss Keen and Dr. Muller comment that in their opinion *Volsella* is well established. Dr. Reeside, in supporting the petition, notes that in his opinion little harm would be done by using *Volsella*.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

9. Issue of Voting Paper V.P.(52)49 : On 15th May 1952, a Voting Paper (V.P.(52)49) was issued in which the Members of the Commission were invited to vote either for, or against the proposal “relating to the name *Modiolus* Lamarck, 1799, etc.,

as set out in Points (1) to (4) in paragraph 11 on pages 70 and 71 of volume 6 of the *Bulletin of Zoological Nomenclature*” [i.e. in paragraph 11 of the application reproduced in the first paragraph of the present *Opinion*].

10. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 15th August 1952.

11. Particulars of the Voting on Voting Paper V.P.(52)29 : The state of the voting on Voting Paper V.P.(52)49 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received) :*

Riley ; Hering ; Calman ; Dymond ; Hankó ; Bonnet ;
Vokes ; do Amaral ; Pearson² ; Bradley ; Hemming ;
Esaki ; Lemche ; Cabrera ; Boschma ;

(b) *Negative Vote, One (1) :*

Stoll ;

(c) *Voting Papers not returned, two (2) :*

Jaczewski ; Mertens.

12. Declaration of Result of Vote : On 16th August 1952, Mr. Hemming, Secretary to the International Commission, acting as

² Commissioner Pearson exercised in this case the right conferred by the Thirteenth International Congress of Zoology, Paris, 1948, under which a Commissioner may, if he so desires, signify his willingness to support the view, or the majority view, of other members of the Commission (1950, *Bull. zool. Nomencl.* 4 : 50—51).

Returning Officer for the Vote taken on Voting Paper V.P.(52)49, signed a certificate that the Votes cast were as set out in paragraph 11 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

13. On 8th May 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)49.

14. The following are the original references for the names placed on the *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

- Modiola* Lamarck, 1801, *Syst. Anim. sans Vertèbr.* : 113
Modiolus Lamarck, 1799, *Mém. Soc. Hist. nat. Paris 1799* : 87
modiolus, *Mytilus*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 706
Volsella Scopoli, 1777, *Introd. Hist. nat.* : 397
Volsella Modeer, 1793, *K. Vetensk. Acad. Nya Handl.*, Stockholm
14 : 179
Vulsella [Humphreys], 1797, *Mus. calonn.* : 44
Vulsella Röding, 1798, *Mus. bolten.* (2) : 156
Vulsella Lamarck, 1799, *Mém. Soc. Hist. nat. Paris 1799* : 82
vulsella, *Mya*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 671

15. The gender of the generic names *Modiolus* Lamarck, 1799, and *Vulsella* Röding, 1798, is masculine and feminine respectively.

16. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has been ascertained that an addition, or additions, to the foregoing *Official List* and/or the corresponding *Official Index of Rejected and Invalid Family-Group Names in Zoology* will need to be made in order to complete the action which, under the General Directives given to the International Commission by the International Congress of Zoology, is required

to be taken in the present case. This question is now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

17. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

18. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

19. The present *Opinion* shall be known as *Opinion Three Hundred and Twenty-Five (325)* of the International Commission on Zoological Nomenclature.

DONE in London, this Eighth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

**OPINIONS AND DECLARATIONS
RENDERED BY THE INTER-
NATIONAL COMMISSION ON
ZOOLOGICAL NOMENCLATURE**

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the Commission

VOLUME 9. Part 17. Pp. 267—282

OPINION 326

Validation, under the Plenary Powers, of the generic name *Hexarthra* Schmarda, 1854 (Class Rotifera) and matters incidental thereto



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 326

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 326

VALIDATION, UNDER THE PLENARY POWERS, OF THE GENERIC NAME "HEXARTHRA" SCHMARDA, 1854 (CLASS ROTIFERA) AND MATTERS INCIDENTAL THERE TO

RULING : (1) Under the Plenary Powers, (a) the specific name *polyptera* Schmarada, 1854, as published in the combination *Hexarthra polyptera*, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy ; (b) the indication, by monotypy, of *Hexarthra polyptera* Schmarada, 1854, as the type species of *Hexarthra* Schmarada, 1854, is hereby set aside and the nominal species *Pedalion fennicum* Levander, 1892, is hereby designated as the type species of *Hexarthra* Schmarada, 1854.

(2) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* as Name No. 793 :—*Hexarthra* Schmarada, 1854 (gender : feminine) (type species, by designation, under the Plenary Powers, under (1)(b) above : *Pedalion fennicum* Levander, 1892).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 228 to 230 respectively :—(a) *fennicum* Levander, 1892, as published in the combination *Pedalion*

fennicum (specific name of type species, by designation, under the Plenary Powers, under (1)(b) above, of *Hexarthra* Schmarda, 1854); (b) *intermedia* Wiszniewski, 1929, as published in the combination *Pedalia intermedia*; (c) *mira* Hudson, 1871, as published in the combination *Pedalion mira*.

(4) The under-mentioned generic names or reputed generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name Nos. 203 to 206 respectively :—(a) *Pedalia* Barrois, 1878 (a reputed but non-existent name); (b) *Pedalion* Swainson 1838 (a junior homonym of *Pedalion* Dillwyn, 1817); (c) *Pedalion* Hudson, 1871 (a junior homonym of *Pedalion* Dillwyn, 1817); (d) *Pedalion* Buckton, 1903 (a junior homonym of *Pedalion* Dillwyn, 1817).

(5) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Name No. 107 :—*polyptera* Schmarda, 1854, as published in the combination *Hexarthra polyptera*, as suppressed, under the Plenary Powers, under (1)(a) above.

I.—THE STATEMENT OF THE CASE

On 9th April 1948 Dr. G. M. Neal (*University of Toronto, Department of Zoology, Toronto, Canada*) submitted a preliminary communication on the subject of the name properly applicable to the genus of the Class Rotifera formerly known as *Pedalion* Hudson, 1871, or as *Pedalia* Barrois, 1878. For the reasons explained in paragraph 3 below this communication was later converted into a formal application to the Commission and was in addition revised in various respects. The application so revised

was submitted by Dr. Neal on 27th April 1951. It was as follows :—

Application for the stabilisation of the name for the genus of the Class Rotifera formerly known as “ Pedalion ” Hudson, 1871, or “ Pedalia ” Barrois, 1878, including a request for the use of the Plenary Powers to vary the type species of the genus “ Hexarthra ” Schmarda, 1854, and to suppress the trivial name “ polyptera ” Schmarda, 1854, published in combination with that generic name, and matters incidental thereto

By G. M. NEAL

(Department of Zoology, University of Toronto, Canada)

1. The object of the present application is to invite the International Commission on Zoological Nomenclature to use its Plenary Powers to stabilise the name for the genus of the Class Rotifera formerly known as *Pedalion* Hudson, 1871, or as *Pedalia* Barrois, 1878, by designating a recognisable species to be the type species of the genus *Hexarthra* Schmarda, 1854. The facts of this rather complicated case are set out in the following paragraphs.

2. The generic name *Pedalion* Hudson, 1871 (*Mon. microscop. J.* 6 : 121, pl. 94) was established for a monotypical genus for a new species then named *Pedalion mira*. The name *Pedalion* Hudson, 1871, is invalid, because it is a junior homonym both of *Pedalion* Dillwyn, 1817 (*Descr. Cat. Shells* : 282) and of *Pedalion* Swainson, 1838 (*Nat. Hist. Fishes* 1 : 199). It will be convenient if, before considering whether there is any subjectively identical nominal genus, the name of which should replace the invalid name *Pedalion* Hudson, 1871, we examine briefly the subsequent history of Hudson's name *Pedalion*.

3. In 1877 Barrois gave a paper at the Sixth Session of the “ Association française pour l'Avancement des Sciences ” held at Le Havre, entitled : “ Sur l'anatomie et le développement du *Pedalia mira* ”. This paper was published in 1878. Although, as noted above, the generic name was written in the form *Pedalia* in the title of Barrois' paper, that name appeared in the form *Pedalion* at every point at which it appeared in the body of that paper. Rousselet in 1914 (*Association française pour l'Avancement des Sciences, 43e Session, Le Havre, C. R.* : 535—536) drew attention to this inconsistency and raised the question whether it was due to an editorial error or whether it should be explained on the ground that Barrois was aware of the fact that the name *Pedalion* Hudson, 1871, was invalid and tried to get over this difficulty by substituting the variant form *Pedalia* in the title of his paper. It must be noted, however, that an abstract of this paper of Barrois' was published in the issue of the *Revue scientifique*

of 29th September 1877, and that in this paper only the spelling *Pedalion* occurs. In this abstract no title was given for this paper and it is possible that it is for this reason that the spelling *Pedalia* did not appear on this occasion, for (as noted above) it was only in the title of Barrois' paper that the spelling *Pedalia* was used. It may be noted incidentally at this point that the species dealt with by Barrois in the foregoing paper is not only not (as he supposed) the species which in 1871 Hudson had named *Pedalion mira*; it is not even referable to the same genus; it is actually a marine species of the genus *Synchaeta* Ehrenberg, [1832] (*Abh. preuss. Akad. Wiss.* 1831 : 135).

4. Since 1913 the genus named *Pedalion* by Hudson has been called both by that name and by the reputed name *Pedalia* Barrois, 1878, the latter having even made its way into Neave's *Nomenclator zoologicus* (3 : 632), where it is quoted as a substitute name for *Pedalion* Hudson, 1871, the reference being given as "*Pedalia* Barrois, 1878, *C.R. Ass. Franc.* 6 (1877 Le Havre), 661".

5. I am bound to say that, in my view, it is impossible to accept, as a valid substitute name, a name (such as *Pedalia*) which appears only in the title of a paper, the correct spelling (in this case, *Pedalion*) occurring at every point in the body of the paper itself, where, if Barrois had intended to emend Hudson's name *Pedalion* in this way, he would certainly have used the spelling "*Pedalia*". It is clear, however, that no progress can be made in the stabilisation of the name of this important genus until this preliminary question has been disposed of. I accordingly ask the International Commission on Zoological Nomenclature to give a ruling that the use of the word *Pedalia* in the title (but not in the text) of Barrois' paper does not constitute the publication of a generic name consisting of this word, the spelling "*Pedalia*" being due, it must be concluded, to some inadvertence on the part of the editor of Barrois' paper or on that of the printer.

6. It is necessary now to consider whether there is any nominal genus possessing a valid name, the type species of which can be regarded as belonging to the genus *Pedalion* (or *Pedalia*) as hitherto understood. An examination of the literature shows that there is such a nominal genus, which does, or may, satisfy this condition. This is the genus *Hexarthra* Schmarda, 1854 (*Denskr. Acad. Wiss. Wien (Math.-natur. K1.)* 7 (No. 2) : 15). This genus is monotypic, its sole species being *Hexarthra polyptera* Schmarda, 1854, a then newly described (: 15) nominal species. This species is therefore the type species of the genus *Hexarthra* Schmarda by monotypy.

7. Our next step must be to consider the claims of the nominal species *Hexarthra polyptera* Schmarda to be regarded as representing a

species of *Pedalion* (or *Pedalia*). The specimen upon which Schmarda based his description and figures of this nominal species, which was hardly visible to the naked eye, was discovered by him in a pool at El Kab in Egypt. At first Schmarda mistook this animal for a crustacean larva, but the "Raderorgan" and jaws showed that it was a Rotifer. The jaws had seven teeth on each side. Schmarda's type specimen is missing, and the species which he described has not been reported by any subsequent worker.

8. In drawing up his description and preparing his figures of this species, Schmarda was severely handicapped by reason of the fact that he was working under field conditions and had no opportunity for studying the animal at leisure. This stand is taken also by Daday, 1903 (*Mikroskopische Süßwassertiere aus Kleinasien. Wien. Sitzungsber. (Math.-Natur. Kl.)* 112 (Abth. 1) : 139—168). When after the publication of the name *Pedalion*, the view was advanced that the genus so named was indistinguishable taxonomically from the genus *Hexarthra* Schmarda, Hudson objected on the ground that Schmarda had described the six plumose appendages as originating from the ventral side, as in a nauplius larva, while in his genus *Pedalion* these appendages were arranged around the animal. Hudson admitted, however, the difficulty of studying the arrangement of the hairs on the appendages of *Pedalion* species, a difficulty which may be illustrated by the mistakes which he himself made in some of his own figures and descriptions.

9. Daday (1886, *Morph. Physiolog. Beiträge zur Kenntniss der Hexarthra polyptera* Schmarda. *Termesztudományi Füzetek* 10 : 214—249, pls. VIII, IX) believed that, in representing the appendages of *Hexarthra polyptera* as arising from the ventral side of the animal, Schmarda had been influenced by the apparent similarity between members of the genus *Pedalion* and the nauplius larva of Crustacea, a resemblance which, though apparent at first glance, is found on closer examination to be entirely superficial in character.

10. Levander (1894, *Beiträge zur Kenntniss der Pedalion Arten mit einer Tafel. Soc. Faun. Flor. fenn.* 11 : 1—34, figs. 1, 2, 3) considered that, if one were to identify *Pedalion* with *Hexarthra*, it would be necessary to attribute to Schmarda a lack of observation which, in his view, there was no ground for assuming. Levander quoted the opinion of Plate—that, if Schmarda could show (as he did) the arrangement of the hairs on the appendages (which in *Pedalion* are found only on the ventral appendage) and the number of teeth in the jaws, he could not possibly have made the mistake of representing appendages as arising from the ventral side of the animal instead of being arranged in a circle around it. Plate concluded that, in view of these facts, the presence of hooks on appendages other than the ventral appendage, and the origin of the appendages from the ventral side of the animal, it was impossible to synonymise *Hexarthra* with *Pedalion*. As regards Plate's comment on these lateral hooks on the appendages, it is,

however, worth noting that Daday recorded the presence of similar hooks on the dorsal appendage in his figure of his *Pedalion mucronatum* Daday, 1909 (*Trav. Soc. Nat. Petersb.* 39 : 9—38, pl. 1, figs. 2—6), a nominal species which has been identified with *Pedalion oxyure* Sernov, 1903 (*Turkestanaskago Otd. imp. russ. geogr. Obsch.* 4 (Pt. 3) : 9, pl. 1, figs. 2, 3), in the figures of which no lateral hooks are shown on the dorsal appendage. This difference between the illustrations given by Sernov and Daday, to which attention has not so far been drawn, has not prevented authors from accepting *Pedalion mucronatum* Daday and *Pedalion oxyure* Sernov as being no more than different names for a single species. I have never noted lateral hooks on any but the ventral appendage. Daday's (1909) representation of hooks on the dorsal appendage may be due to incorrect interpretation. (See below.)

11. Thus against the view that *Hexarthra polyptera* Schmarda is a species of the genus that Hudson named *Pedalion* is the observation by Schmarda that the appendages arise from the ventral surface and that there are lateral hooks on appendages other than the ventral appendage. As already noted, however, Daday himself showed incorrectly the presence of such hooks in his *P. mucronatum* (= *P. oxyure* Sernov). It must be noted also that at times the fold of the integument on the appendages can give a somewhat laddered appearance which under low magnifications may be mistaken for hooks. The presence of jaws in *H. polyptera* speaks for its being a rotifer. In view of the absence of posterior digitiform appendages (such as are found in *Pedalion mira* Hudson), Schmarda's species might well belong to the *fennicum*-group of the genus *Pedalion*. The arrangement of the hairs on the appendages is very similar to that found in a species of *Pedalion* which occurs in the Saskatchewan lakes of Canada. The principal objection to the acceptance of Schmarda's species as belonging to the genus *Pedalion* is therefore his statement that the appendages come from the ventral side of the animal. As regards this, it must be noted, however, that a similar appearance can be obtained by placing a specimen of an undoubted species of *Pedalion* under a cover slip, the weight of which has flattened the animal (Schmarda's figure seems to have been drawn from a flattened specimen); unless one constantly alters the focus while drawing the animal as a whole or one of its appendages in order to obtain the correct relation, it is very easy to arrive at the same conclusion as that reached by Schmarda. An inaccuracy of this kind on the part of Schmarda would not be surprising if we recall the difficulties with which he was faced, by reason of having to examine his material in the field instead of in a laboratory.

12. The next point which it is important to note is that Schmarda found his species *Hexarthra polyptera* in abundance in the waters which he examined. This fact suggests that that species, whatever it was, would have been found again by subsequent workers. The

species *Pedalion fennicum* Levander, 1892 (*Zool. Anz.* **15** : 403) has, in fact, been reported from North Africa, where it appears to be rather widely distributed. Recent observations show that this species shows considerable variation in the arrangement of the hairs and some variation in the tooth formula—a fact which may account, in part, for some of the special features shown in Schmarda's figures. Further, Bryce in his paper on the Rotifera of Devil and Stump Lakes (1924, *J. Quekett microscop. Club* **15** : 81—108) mentioned having examined a slide of *Pedalia* from El Kab (the type locality of Schmarda's species) that had been prepared by Rousselet. I have myself examined a slide of a specimen from this locality that was bought from Rousselet by the United States National Museum. The specimen mounted on this slide is a *Pedalion*.

13. The conclusion which I draw from an examination of Schmarda's (admittedly poor) description and figure is that the species which he described as *Hexarthra polyptera* belongs to Hudson's genus *Pedalion*. This conclusion becomes a virtual certainty, now that we have an actual specimen of a *Pedalion* from the very pond in which Schmarda took his *polyptera* but in spite of the abundance of that species noted by Schmarda no specimen of a species belonging to a separate genus recognisable from Schmarda's description as *Hexarthra* is known from that very restricted locality. Schmarda's description of the arrangement of the hairs on the ventral appendages, the number of hooks on the ventral appendage that he noted, as also the number of teeth (seven) in each uncus, all place the animal described by Schmarda in the *fennicum*-group of the genus *Pedalion*.

14. In the light of the foregoing considerations, I reach the conclusion that the nominal genera *Hexarthra* Schmarda, 1854, and *Pedalion* Hudson, 1871, must, on taxonomic grounds, be regarded as subjectively identical with one another. Accordingly, the name which under the Code should be applied to this genus is *Hexarthra* Schmarda and, as it is the older of the two names, would still be the correct name for this genus, even if *Pedalion* Hudson, 1871, were not an invalid homonym. In view of the considerable discussion that has taken place in regard to this question and also of the importance and interest of this genus, I think that it is important that this subject should now be closed by the name *Hexarthra* Schmarda being placed on the *Official List of Generic Names in Zoology* and the invalid name *Pedalion* Hudson, 1871, on the *Official Index of Rejected and Invalid Generic Names in Zoology*, together with the reputed, but non-existent, name *Pedalia* Barrois, 1878. It would be useful also if all other invalid uses of the name *Pedalion* subsequent to the name *Pedalion* Dillwyn, 1817 (Class Pisces) were at the same time to be relegated to the *Official Index*.

15. At this point we encounter a difficulty of quite a different order. The nominal species *Hexarthra polyptera* Schmarda, though incorrectly

and inadequately described, must be regarded as belonging to the highly variable group represented by *Pedalion fennicum* Levander, 1892. Accordingly, under the Code the trivial name *polyptera* Schmarda, 1854, being much older than *fennicum* Levander, would replace the latter name. The trivial name *fennicum* Levander is, however, so deeply entrenched in the literature that its replacement by the hitherto contentious name *polyptera* Schmarda would certainly give rise to confusion and would be open to strong objection. In order to prevent this confusion, I accordingly ask the International Commission on Zoological Nomenclature to use its Plenary Powers to suppress the trivial name *polyptera* Schmarda, thereby validating the later name *fennicum* Levander for the same species. As part of this proposal, I ask the International Commission to use the same powers to designate *Pedalion fennicum* Levander, 1892, to be the type species of *Hexarthra* Schmarda, in place of the older nominal species *Hexarthra polyptera* Schmarda, the name of which it is now proposed should be suppressed. The trivial name *fennicum* Levander, 1892, as published in the binominal combination *Pedalion fennicum* should then be placed upon the *Official List of Specific Trivial Names in Zoology*. Incidentally, it would be helpful if at the same time the International Commission were to place on this *Official List* the trivial names, each an available name and the oldest name for the species concerned, of two other well-known species of this genus. These trivial names are : (1) the trivial name *mira* Hudson, 1871 (*Mon. microscop. J.* 6 : 121), as published in the binominal combination *Pedalion mira* ; (2) the trivial name *intermedia* Wiszniewski, 1929 (*Bull. Acad. pol. Sci. Lettr.* (Cl. Sci. math. nat.) (B) 1929 (2) : 137)), as published in the binominal combination *Pedalia intermedia*.

16. The specific proposals which I now therefore lay before the International Commission on Zoological Nomenclature are that it should :—

(1) use its Plenary Powers :—

- (a) to suppress, for the purposes of the Law of Priority but not for those of the Law of Homonymy the trivial name *polyptera* Schmarda, 1854, as published in the binominal combination *Hexarthra polyptera* ;
- (b) to set aside the indication, by monotypy, of *Hexarthra polyptera* Schmarda, 1854, as the type species of the genus *Hexarthra* Schmarda, 1854, and having done so, designate *Pedalion fennicum* Levander, 1892, to be the type species of that genus ;

(2) place the generic name *Hexarthra* Schmarda, 1854 (type species, by designation, as proposed in (1) (b) above, under the Plenary Powers : *Pedalion fennicum* Levander, 1892) (gender of generic name : feminine) on the *Official List of Generic Names in Zoology* ;

(3) place the under-mentioned generic names or reputed generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

- (a) *Pedalia* Barrois, 1878 (a reputed but non-existent name) ;
- (b) *Pedalion* Swainson, 1838 (a junior homonym of *Pedalion* Dillwyn, 1817) ;
- (c) *Pedalion* Hudson, 1871 (a junior homonym of *Pedalion* Dillwyn, 1817) ;
- (d) *Pedalion* Buckton, 1903 (*Monogr. Membr.* No. 6 : 251) (a junior homonym of *Pedalion* Dillwyn, 1817) ;

(4) place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology* :—

- (a) *fennicum* Levander, 1892, as published in the binominal combination *Pedalion fennicum* (trivial name of species proposed, under (1)(b) above, to be designated as the type species of *Hexarthra* Schmarda, 1854) ;
- (b) *intermedia* Wiszniewski, 1929, as published in the binominal combination *Pedalia intermedia* ;
- (c) *mira* Hudson, 1871, as published in the binominal combination *Pedalion mira* ;

(5) place the trivial name *polyptera* Schmarda, 1854, as published in the binominal combination *Hexarthra polyptera* (a name proposed, under (1)(a) above, to be suppressed under the Plenary Powers) on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Dr. Neal's preliminary communication in April 1948, the problem of the name to be accepted for the genus formerly known either as *Pedalion* Hudson, 1871, or as *Pedalia* Barrois, 1878, was allotted the Registered Number Z.N.(S.) 340.

3. Submission of a revised application in 1951 : The examination of the issues involved in the present case had not reached a stage at which it would have been possible to submit it to the Commission at its Session held in Paris in July 1948. Thereafter for some eighteen months the whole resources of the Commission were devoted to the preparation and publication of the Official Records of the Paris Meetings and it was not until the publication in 1950 of volumes 3, 4, and 5 of the *Bulletin of Zoological Nomenclature* (the volumes devoted to the foregoing Records) that it was possible to resume preparations for the publication in the *Bulletin* of applications relating to individual names submitted for decision. Discussions in regard to the present case between the Secretary and Dr. Neal began in November 1950 and were completed on 27th April 1951, when the present formal application was submitted to the Commission. This application covered all the matters dealt with in the original communication of April 1948, together with certain others, notably the proposed addition of names to the *Official Lists* and *Official Indexes* in conformity with the General Directive given to the Commission on this subject by the Thirteenth International Congress of Zoology, Paris 1948.

4. Publication of the present application : The present application was sent to the printer in May 1951 and was published on 28th September of that year in Part 3 of volume 6 of the *Bulletin of Zoological Nomenclature* (Neal, 1951, *Bull. zool. Nomencl.* **6** : 73—78).

5. Issue of Public Notices : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 50—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 28th September 1951, both in Part 3 of volume 6 of the *Bulletin of Zoological Nomenclature* (the Part in which Dr. Neal's application was published) and also to the other prescribed serial publications. The publication of these Notices elicited no objection to the action proposed in this case.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

6. Issue of Voting Paper V.P.(52)50 : On 15th May 1952, a Voting Paper (V.P.(52)50) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the name *Pedalion* Hudson, 1871, and associated names as set out in Points (1) to (5) in paragraph 16 on page 78 of volume 6 of the *Bulletin of Zoological Nomenclature*" [*i.e.* in paragraph 16 of the application reproduced in the first paragraph of the present *Opinion*].

7. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 15th August 1952.

8. Particulars of the Voting on Voting Paper V.P.(52)50 : The state of the voting on Voting Paper V.P.(52)50 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Riley ; Hering ; Calman ; Dymond ; Hankó ; Bonnet ;
Vokes ; do Amaral ; Pearson¹ ; Bradley ; Hemming ;
Esaki ; Lemche ; Cabrera ; Stoll ; Boschma ;

(b) *Negative Votes :*

None ;

¹ Commissioner Pearson exercised in this case the right conferred by the Thirteenth International Congress of Zoology, Paris, 1948, under which a Commissioner may, if he so desires, signify his willingness to support the view, or the majority view, of other members of the Commission (1950, *Bull. zool. Nomencl.* 4 : 50—51).

(c) *Voting Papers not returned, two (2) :*

Jaczewski ; Mertens.

9. Declaration of Result of Vote : On 16th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)50, signed a Certificate that the Votes cast were as set out in paragraph 8 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

10. On 9th May 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)50.

11. The following are the original references for the names placed on the *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

- fennicum*, *Pedalion*, Levander, 1892, *Zool. Anz.* **15** : 403
Hexarthra Schmarda, 1854, *Denskr. Acad. Wiss. Wien* (Math.-natur. Kl.) **7** (No. 2) : 15
intermedia, *Pedalia*, Wiszniewski, 1929, *Bull. Acad. pol. Sci. Lettr.* (Cl. Sci. math. nat.) (B) **1929** (2) : 137
mira, *Pedalion*, Hudson, 1871, *Mon. microscop. J.* **6** : 121
Pedalia Barrois, 1878, *C.R. Ass. franc. Avancem. Sci.* **6** (1877, Le Havre) : 661
Pedalion Swainson, 1838, *Nat. Hist. Fishes* **1** : 199
Pedalion Hudson, 1871, *Mon. microscop. J.* **6** : 121
Pedalion Buckton, 1903, *Monogr. Membr.* No. **6** : 251
polyptera, *Hexarthra*, Schmarda, 1854, *Denskr. Acad. Wiss. Wien* (Math.-natur. Kl.) **7** (No. 2) : 15

12. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology,

Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

13. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

14. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

15. The present *Opinion* shall be known as *Opinion* Three Hundred and Twenty-Six (326) of the International Commission on Zoological Nomenclature.

DONE in London, this Ninth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 19. Pp. 283—298

OPINION 327

Designation, under the Plenary Powers, of a type species
for the nominal genus *Trigonia* Bruguière, 1789, in
harmony with accustomed nomenclatorial usage



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 327

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History),
Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 327

DESIGNATION, UNDER THE PLENARY POWERS, OF A TYPE SPECIES FOR THE NOMINAL GENUS "TRIGONIA" BRUGUIÈRE, 1789, IN HARMONY WITH ACCUSTOMED NOMENCLATORIAL USAGE

RULING :—(1) Under the Plenary Powers, (a) all type designations or selections for the genus *Trigonia* Bruguière, 1789 (Class Pelecypoda) made prior to the present Ruling are hereby set aside, and *Venus sulcata* Hermann, 1781, is hereby designated as the type species of the foregoing genus, and (b) the specific name *nodulosa* Lamarck, 1801, as published in the combination *Trigonia nodulosa*, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(2) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* as Name Nos. 794 and 795 respectively :—(a) *Trigonia* Bruguière, 1789 (gender : feminine) (type species, by designation under the Plenary Powers under (1)(a) above : *Venus sulcata* Hermann, 1781) ; (b) *Neotrigonia* Cossmann, 1912 (gender : feminine) (type species, by original designation : *Trigonia margaritacea* Lamarck, 1804).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 231 to 233 respectively :—(a) *sulcata* Hermann, 1781, as published in the combination *Venus sulcata*, as defined by its lectotype (figs. 9 and 10 (representing the same specimen) on pl. IV of Hermann, 1781), selected by Cox (1951) (specific name of type species, by designation, under the Plenary Powers under (1)(a) above, of *Trigonia* Bruguière, 1789) ; (b) *margaritacea* Lamarck, 1804, as published in the combination *Trigonia margaritacea* (specific name of type species of *Neotrigonia* Cossmann, 1912) ; (c) *aspera* Lamarck, 1819, as published in the combination *Trigonia aspera*.

(4) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Name No. 108 :—*nodulosa* Lamarck, 1801, as published in the combination *Trigonia nodulosa*, as suppressed, under the Plenary Powers, under (1)(b) above.

I.—THE STATEMENT OF THE CASE

On 30th October 1950, Dr. L. R. Cox (*British Museum (Natural History), London*) submitted an application for the use of the Plenary Powers for the purpose of providing a valid basis for the accustomed usage of the generic name *Trigonia* Bruguière, 1789 (Class Pelecypoda). The form of this application was, as explained in paragraph 4 below, revised in certain directions in the early part of 1951. The application, so revised, was as follows :—

Proposed use of the Plenary Powers to designate a type species for the genus "Trigonia" Bruguière, 1789 (Class Pelecypoda, Order Eulamellibranchiata)

By L. R. COX, Sc.D., F.R.S.

(*Department of Geology, British Museum (Natural History), London*)

The object of the present application is to seek the assistance of the International Commission on Zoological Nomenclature in securing, by the use of its Plenary Powers, that the type species of the important and well-known genus, *Trigonia* Bruguière, 1789 (*Ency. méth. (Vers)* 1 : xiv) shall be a clearly identifiable species of the genus universally known by that name. It is hoped that it will be possible for the International Commission to give an early decision on the present application, since that decision is urgently required in connection with the preparation of the relevant portion of the forthcoming *Treatise on Invertebrate Paleontology*.

2. In order to make clear the nature of the problem involved, I set out below particulars of the way in which the name *Trigonia* was

used on each of the first five occasions on which that name appeared in print :—

(1) *Original publication by Bruguière in 1789*

A short generic diagnosis was given ; no bibliographical references were given ; no nominal species was cited as belonging to the genus.

(2) *As used by Bruguière in 1797 (Ency. méth. (Vers) 2 : pls. 237, 238)*

The name *Trigonia* appeared at the head of the foregoing plates, on which were figured several species of what are now known as *Trigonia*. No names were cited for those species.

(3) *As used by Lamarck, 1799 (Mém. Soc. Hist. nat. Paris 1799 : 86)*

Lamarck gave a short diagnosis for the genus and in addition cited the following reference : “ *Trigonia* . . . Encycl. t.237. Naturforsch. 15e livraison, t. iv ”.

At the time of the publication of the foregoing paper by Lamarck, the species figured on the plate in the *Encyclop. méth.* were still unnamed, but the second of the plates cited by Lamarck belongs to a paper by Hermann (1781, “ Brief über einige Petrefacten ”, *Naturforscher* 15 : 115—134, pls. 4, 5), who was an undoubtedly binominal author, which does contain binominal names for the species figured, namely :— (1) *Cardium tortuosum* ; (2) *Venus* oder *Donax sulcata* ; (3) *Venus* oder *Donax tuberculata* ; (4) *Venus* oder *Donax nodosa* ; (5) *Venus* oder *Donax dubia*.

(4) *As used by Lamarck, 1801 (Syst. Anim. sans Vertèbr. : 116)*

On this occasion Lamarck gave a generic diagnosis, repeated the reference to “ Naturf. 15e livraison t.4 ”, and cited without specific diagnosis one nominal species, as follows :—“ *Trigonia nodulosa* n. Knorr. Foss. p. 11, t.17, f.8. Encyclop. t.237, f.4 ”.

(5) *As used by Lamarck, 1804 (Ann. Mus. Hist. nat. Paris 4 : 354)*

Lamarck again gave a generic diagnosis. He cited one nominal species only, the Recent *T. margaritacea* Lamarck (then named for the first time—on page 355).

3. As the name *Trigonia* Bruguière, 1789, was published prior to 1st January 1931, with a generic diagnosis, the fact that no nominal species was cited as belonging to this genus does not invalidate it. Accordingly this name is available as from Bruguière, 1789. In order to ascertain what nominal species is, under the *Règles*, the type species of *Trigonia* Bruguière, it is necessary to apply the rules laid down for determining the type species of a genus established without any nominal species cited as belonging thereto. Until 1948, the only rules dealing

with this subject were those laid down in the Commission's *Opinion 46* (1912, *Smithson. Publ.* 2060 : 104—107). At its Session held in Paris in July 1948, the International Commission on Zoological Nomenclature, when drawing up, for submission to the International Congress of Zoology, proposals for the incorporation in the *Règles* of interpretative rulings given in previously published *Opinions*, gave special consideration to the problem dealt with in *Opinion 46*. The conclusions then reached by the Commission, which were approved by the Congress, involved both the amendment and clarification of the ruling previously given in the foregoing *Opinion*. The terms of the decision then taken have since been published in the *Official Record of the Proceedings* of the Commission at its Paris Session (1950, *Bull. zool. Nomencl.* 4 : 159—160, 346). It is therefore in the light of the foregoing decisions that the type species of *Trigonia* Bruguière must be determined.

4. In the first of the decisions cited above, it was provided that “where, prior to 1st January 1931, a generic name was published for a genus established (a) with an indication, definition or description, (b) with no nominal species distinctly referred to it, the first nominal species to be subsequently so referred to it by the same or another author is to be deemed to have been an originally included species and that species automatically becomes the type species of the genus in question”. At the same time *Opinion 46* was cancelled. In the later of the decisions cited above, provision was made for the case where on the first occasion on which any nominal species was subsequently referred to such a genus, two or more such species were referred, it being then provided that in such a case all the nominal species so referred to the genus in question were to be treated as originally included species and that it was from those species alone that a subsequent author, acting under Rule (g) in Article 30, could validly select a type species for the genus.

5. Applying the foregoing decisions to the case of *Trigonia*, we see at once that the action by Bruguière in 1797 (case (2) above) in applying the name *Trigonia* to certain unnamed species figured on plates has no bearing on the present problem, for, as no names were applied to those species, Bruguière did not on that occasion “distinctly refer” any nominal species to this genus.

6. We have next to consider whether Lamarck's action in 1799 (case (3) above) has any bearing on the present problem. In this case, it will be recalled, Lamarck cited no nominal species as belonging to this genus but he did give a reference to a previously published paper in which certain nominal species were figured (by Hermann in 1781). Prior to the Paris Congress of 1948, it was held by some authors that the citation by Lamarck of Hermann's paper should be deemed to constitute the reference to the genus *Trigonia* of the nominal species figured by Hermann. Thus, in 1932 (*Amer. J. Sci.* (5) 24 : 449) Crickmay argued that the type species of this genus could be selected

only from among the nominal species which (1) conformed with Bruguière's diagnosis and (2) had already been described by 1789, and that the only such species were those described by Hermann. Crickmay thereupon selected as the type species of *Trigonia* the second of the species cited by Hermann, namely "*Venus* oder *Donax sulcata*" Hermann, 1781 (*Naturforscher* 15 : 127) ; in 1936 this selection was accepted, though on slightly different grounds, by Rennie (*Ann. S. Afr. Mus.* 31 : 331—332). This species is a Jurassic species of the Costatae group of the genus now known as *Trigonia*. In view, however, of the requirement laid down by the Paris Congress in 1948, that, in order to be available for selection as the type species of a genus established without nominal species, a nominal species must have been "distinctly" referred to the genus in question by the first subsequent author to place any nominal species in the genus in question, it does not appear that Lamarck's action in citing a reference to a plate by an earlier author without himself citing any nominal species can properly be held to amount to his having "distinctly referred" to *Trigonia* the species figured by Hermann. This is a question, however, on which it would be helpful if the International Commission, when dealing with the present application, would give an express ruling in a Declaration under the procedure prescribed by the Paris Congress (1950, *Bull. zool. Nomencl.* 4 : 136—137).¹

7. If, as appears to be the case, Lamarck's action in 1799 did not amount to the "distinct" reference of any nominal species to the genus *Trigonia*, the next work to be considered is Lamarck's *Syst. Anim. sans Vertèbr.* of 1801 (case (4) above). On this occasion, Lamarck cited as belonging to this genus one nominal species—and one species only—namely the then new species *Trigonia nodulosa*. Accordingly, on the view advanced above, that species becomes the type species of *Trigonia* Bruguière, by monotypy. The interpretation of this nominal species rests exclusively upon the figures cited by Lamarck and does not depend upon the identity of any specimen preserved in the Lamarckian Collection. The reference given by Lamarck to Knorr is bibliographically incorrect, as Lamarck assigned his own numbers to Knorr's plates ; the plate intended by Lamarck, when he referred to "plate 17" is apparently Knorr's plate "B.I.a". Figure 8 (the figure no. cited by Lamarck) represents a broken *Trigonia*. The species figured is, however, specifically indeterminate. The interpretation of the nominal species *Trigonia nodulosa* Lamarck, 1801, thus rests solely upon figure 4 on plate 237 of the *Encyclopédie méthodique*.

8. Unfortunately, however, it has to be noted at this point that in 1819 (*Hist. nat. Anim. sans Vertèbr.* 6 (1) : 63, 64) Lamarck identified the species figured as fig. 4 on pl. 237 of the *Encyclop. méth.* as *Trigonia aspera* Lamarck, 1819 (*loc. cit.* 6 (1) : 63) and figure 2 on the same plate as *Trigonia nodulosa* Lamarck, 1801. The same interpretations

¹ See paragraph 3 of the present *Opinion*.

were repeated by Lamarck in explanation of pl. 237 of the *Encyclop. méth.* We have therefore the difficulty of deciding whether the "f.4" cited by Lamarck in 1801 was a misprint (or slip of the pen) for "f.2" or whether in 1819 Lamarck transferred the identification from the one species to the other. It may be mentioned that a specimen in the Lamarckian Collection figured by Favre (J.) in 1914 (*Cat. illustr. Coll. Lamarck* (3) : pl. 35, figs. 253a, b) as *Trigonia nodulosa* Lamarck appears to be the species represented by fig. 2 of plate 237 rather than that represented by figure 4. This does not, however, establish the identity of the taxonomic species represented by the nominal species *Trigonia nodulosa* Lamarck, 1801, which rests solely upon the bibliographical reference then cited. Accordingly, if we reject the suggestion that Lamarck's reference in 1801 to the *Encyclop. méth.* is a misprint (a suggestion which would require a ruling from the Commission to secure definitive acceptance), it appears that the taxonomic species represented by the nominal species (*Trigonia nodulosa* Lamarck, 1801), which is the type species of the genus *Trigonia* Bruguière by monotypy, is the species usually known as *Trigonia aspera* Lamarck, 1819, to which the name *Trigonia nodulosa* should be transferred. This species is of Jurassic age and belongs to the Clavellatae group of the genus now known as *Trigonia*.

9. Reviewing the position as set out above, there are, it seems to me, strong objections to the acceptance, as the type species of *Trigonia* Bruguière, of the nominal species *Trigonia nodulosa* Lamarck, 1801. I hold this view for two reasons: (1) Crickmay's (1932) selection of *Venus sulcata* Hermann, 1781, as the type species of *Trigonia* Bruguière, though (as it appears) invalid, has been accepted by later workers, having been adopted by Rennie in 1936, by Shimer & Shrock in 1944 (*Index Fossils of N. America* : 401), and by Cox and Arkell in 1948 ("Survey of the Mollusca of the British Great Oolite Series", *Mon. pal. Soc.* : 21). The interpretation of *Venus sulcata* Hermann is not in doubt, and by the acceptance of that species as the type species of *Trigonia*, this important genus of Mesozoic fossils is clearly defined. (2) The acceptance of *Trigonia nodulosa* Lamarck as the type species of this genus would not only involve a confusing change in existing practice (including the acceptance, as the type species, of a species belonging to the Clavellatae group of the genus in place of a species belonging to the Costatae group) but would also involve the acceptance, as the type species, of a species (*Trigonia nodulosa* Lamarck) which at present is universally known by another name (*Trigonia aspera* Lamarck). In view of the importance of the genus *Trigonia* Bruguière and the confusion which, in this instance, would be involved by the strict application of the *Règles*, I consider that this is a case where it is desirable that the International Commission should use its Plenary Powers to designate *Venus sulcata* Hermann, 1781, as the type species of this genus, and, in order to avoid the confusing transfer of trivial names referred to above, also to suppress the trivial name *nodulosa* Lamarck, 1801, as published in the combination *Trigonia nodulosa*.

Further, in view of the fact that in 1804 Lamarck (case (5) in the second paragraph of the present application) applied the name *Trigonia* to a recent species (*Trigonia margaritacea* Lamarck, 1804) which has since become the type species of a separate genus, *Neotrigonia* Cossmann, 1912 (*Ann. Paléont.* 7(2) : 81), it would be desirable for the Commission to take the present opportunity to place the name *Neotrigonia* Cossmann on the *Official List of Generic Names in Zoology* at the same time as the name *Trigonia* Bruguière, the trivial names of the type species of these genera, together with the trivial name *aspera* Lamarck, 1819, as published in the combination *Trigonia aspera*, being simultaneously placed on the *Official List of Specific Trivial Names in Zoology* and the trivial name *nodulosa* Lamarck, 1801, as published in the combination *Trigonia nodulosa*, as proposed to be suppressed under the Plenary Powers, on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*.

10. There is one final point to which attention should be given ; this is in relation to the identity of the taxonomic species represented by the nominal species *Venus sulcata* Hermann, 1781. There is just the possibility that the specimens illustrated by Hermann may have belonged to two species, and it is accordingly desirable to place the identity of this species beyond doubt by selecting a lectotype under the procedure prescribed by the International Congress of Zoology when in 1948 it revised the provisions of Article 31 of the *Règles* (1950, *Bull. zool. Nomencl.* 4 : 73—76). In a paper on the classification of the family TRIGONIIDAE which will be published in the *Proceedings of the Malacological Society of London* in the course of 1950, I have therefore selected figures 9 and 10 (representing the same specimen) on Hermann's plate IV to represent the lectotype of this species². This

² Note dated 12th May 1954, by Francis Hemming, Secretary to the Commission: When I came to prepare the present *Opinion*, I wrote to Dr. Cox (the applicant in this case) for the purpose of ascertaining the date on which the paper which he had mentioned as having submitted to the Malacological Society of London had actually been published, it being necessary to establish this date in order to determine whether his selection of figures 9 and 10 (representing the same specimen) on Hermann's plate IV to represent the lectotype of *Venus sulcata* Hermann, 1781, had been published first in the *Proc. malac. Soc. London* or in volume 6 of the *Bull. zool. Nomencl.* As will be seen from the following extract from Dr. Cox's reply of 11th May 1954, the foregoing lectotype selection was first made in the *Bull. zool. Nomencl.* :—

The full reference to my paper is as follows :—Cox, L. R. "Notes on the Trigoniidae, with Outlines of a Classification of the Family." *Proc. Malac. Soc. London*, vol. 29, pp. 45—70, pls. 3, 4 ; Jan. 9th, 1952. (page 51, last two lines—"I now designate the original of Hermann's fig. 9, from Gundershofen, as lectotype of the species" [*Venus* oder *Donax sulcata* Hermann, said in the explanation of Hermann's pl. 4 to be represented by figs. 2, 3, 4, 9, 10 of this plate]).

As just mentioned, the *Proc. Malac. Soc.* paper did not appear until Jan. 9th, 1952, approximately 12 months after it was read to the Society. My paper in the *Bulletin* was, therefore, published first.

specimen is from the Upper Lias of Gundershofen, Alsace. The larger specimen, said to come from Champagne, which is represented in figs. 3 and 4 of the same plate and is also referred to *Venus sulcata*, may well belong to a different species and have come from a different formation. I have selected the Gundershofen specimen in preference to that from Champagne to represent the lectotype because in the description of this species Gundershofen is the only locality mentioned and figures 9 and 10 alone are cited. As it is possible that the paper containing the foregoing lectotype selection may not be published until after the appearance of the present application in the *Bulletin of Zoological Nomenclature*, I ask the International Commission Zoological Nomenclature to take note of the action proposed and, when placing the trivial name *sulcata* Hermann, 1781, as published in the binominal combination *Venus sulcata*, on the *Official List of Specific Trivial Names in Zoology*, to add a note that the name so placed on the *Official List* is applicable to the species defined by the foregoing lectotype.

11. I accordingly recommend that, in addition to rendering a *Declaration* clarifying the position arising when, in the case of a genus established without any nominal species distinctly referred thereto, a subsequent author, without citing any such species, gives a bibliographical reference to an earlier publication containing the names of such species, the International Commission on Zoological Nomenclature should :—

(1) use its Plenary Powers :—

- (a) to set aside all type designations or selections made for the genus *Trigonia* Bruguière, 1789, prior to the date of the proposed decision, and to designate *Venus sulcata* Hermann, 1781, to be the type species of that genus ;
- (b) to suppress for the purposes of the Law of Priority but not for those of the Law of Homonymy the trivial name *nodulosa* Lamarck, 1801, as published in the binominal combination *Trigonia nodulosa* ;

(2) place the under-mentioned names on the *Official List of Generic Names in Zoology* :—

- (a) *Trigonia* Bruguière, 1789 (type species, by designation under the Plenary Powers, as proposed under (1)(a) above : *Venus sulcata* Hermann, 1781) ;
- (b) *Neotrigonia* Cossmann, 1912 (type species, by original designation : *Trigonia margaritacea* Lamarck, 1804) ;

- (3) place the under-mentioned specific trivial names on the *Official List of Specific Trivial Names in Zoology* :—
- (a) *sulcata* Hermann, 1781, as published in the binominal combination *Venus sulcata*, as defined by its lectotype, figs. 9 and 10 (representing the same specimen) on plate IV of Hermann's *Brief über einige Petrefacten* of 1781³;
 - (b) *margaritacea* Lamarck, 1804, as published in the binominal combination *Trigonia margaritacea* ;
 - (c) *aspera* Lamarck, 1819, as published in the binominal combination *Trigonia aspera* ;
- (4) place the trivial name *nodulosa* Lamarck, 1801, as published in the binominal combination *Trigonia nodulosa*, as proposed in (1)(b) above, to be suppressed under the Plenary Powers, on the *Official Index of Rejected and Invalid Specific Names in Zoology*.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On receipt of Dr. Cox's letter of 30th October 1950, the question of the species to be accepted as the type species of the genus *Trigonia* Bruguière, 1789, was allotted the Registered Number Z.N.(S.) 499.

3. Separate submission of a request for a "Declaration" clarifying the provisions of Article 30 in relation to the type species of nominal genera established without cited nominal species : When Dr. Cox's application came to be examined in detail, it was found that it was not possible to determine what species was, under the *Règles*, the type species of the genus *Trigonia* Bruguière, 1789, without first obtaining from the Commission an interpretation of the portion of Article 30 which prescribes what species are to be accepted as the type species of nominal genera established without cited nominal species. In view of the decision

³ The paper by Hermann here referred to by Dr. Cox was published in vol. 15 of the serial publication *Der Naturforscher*, the title cited by Dr. Cox being the title of Hermann's paper as published in that serial. The following is the full reference for this specific name: *Venus sulcata* Hermann, 1781, *Der Naturforscher* 15 : 127—129, pl. IV, figs. 9, 10.

by the Thirteenth International Congress of Zoology, Paris, 1948, that in future the Commission's *Opinions* Series was to be confined to Rulings on questions relating to individual names and to the status of individual books and that Rulings relating to the interpretation of the *Règles* are to be dealt with by the Commission only in its *Declarations* Series, it was agreed between the Secretary and Dr. Cox that the latter's application should be concerned only with the discussion of problems directly affecting the possible use of the Plenary Powers for the purposes of stabilising the usage of the name *Trigonia* Bruguière and that a separate application should be submitted to the Commission asking for a *Declaration* clarifying the meaning to be attached to the portion of Article 30 to which reference has been made above. Mr. Hemming's application on the latter subject has been reproduced in *Declaration 15*, in which the Commission gave a Ruling on the problem of interpretation submitted⁴.

4. Revision of Dr. Cox's application : The decision to separate the question of the interpretation from the problems directly concerned with the name *Trigonia* Bruguière involved a certain amount of revision in Dr. Cox's application. At the same time Dr. Cox made certain additions to his proposal for the purpose of bringing it into line with the requirements imposed by the decisions regarding the placing of names on *Official Lists* and *Official Indexes* taken by the Paris Congress in 1948. The application, so revised, was submitted on 2nd February 1951.

5. Publication of the present application : The present application and Mr. Hemming's associated request for a *Declaration* clarifying Article 30 were sent to the printer in March 1951 and were published on 28th September 1951 in Part 3 of volume 6 of the *Bulletin of Zoological Nomenclature* (Cox, 1951, *Bull. zool. Nomencl.* 6 : 79—84 ; Hemming, *ibid.* 6 : 85—88).

6. Issue of Public Notices : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 50—56), Public Notice of the possible use by the International Commission on

⁴ For the text of *Declaration 15*, see pp. xxv—xxxvi of the present volume.

Zoological Nomenclature of its Plenary Powers in the present case was given on 28th September 1951, both in Part 3 of volume 6 of the *Bulletin of Zoological Nomenclature* (the Part in which Dr. Cox's application was published) and also to the other prescribed serial publications. The publication of these Notices elicited no objection to the action proposed.

7. Support for the present application by the Joint Committee on Zoological Nomenclature for Paleontology in America : The publication of Dr. Cox's application elicited the following letter dated 18th February 1952 (received on 9th April 1952) from Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America, reporting that the Joint Committee, by nine votes to two, supported the action recommended by Dr. Cox. The following is the text of Professor Sinclair's letter :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you that, being polled, they voted : To support the petition (nine) :—(1) G. Winston Sinclair ; (2) R. C. Moore ; (3) A. Myra Keen ; (4) Bryan Patterson ; (5) Bobb Schaeffer ; (6) Siemon W. Muller ; (7) J. Marvin Weller ; (8) Katherine V. W. Palmer ; (9) John B. Reeside, Jr. To oppose the petition (two) :—(1) Don L. Frizzell ; (2) John W. Wells.

Mr. Patterson notes, while voting for the petition, that he would consider any extension of this decision a mistake, but that as a case of specific exception to the rules it would have his support.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

8. Issue of Voting Paper V.P.(52)51 : On 22nd May 1952, a Voting Paper (V.P.(52)51) was issued in which the Members of the Commission were invited to vote either for, or against the proposal "relating to the name *Trigonia* Bruguière, 1789, as set out in Points (1) to (4) at the foot of page 83 and on page 84 of

volume 6 of the *Bulletin of Zoological Nomenclature*” [i.e. in paragraph 11 of the application reproduced in the first paragraph of the present *Opinion*].

9. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August 1952.

10. Particulars of the Voting on Voting Paper V.P.(52)51 : The state of the voting on Voting Paper V.P.(52)51 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received) :*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ; Vokes ;
Pearson ; Bradley ; do Amaral ; Hemming ; Esaki ;
Riley ; Lemche ; Stoll ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned, three (3) :*

Cabrera⁵ ; Jaczewski ; Mertens.

11. Declaration of Result of Vote : On 23rd August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)51, signed a Certificate that the Votes cast were as set out in paragraph 10 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

⁵ After the close of the Prescribed Voting Period an affirmative Vote was received (on 1st September 1952) from Commissioner Cabrera.

12. On 10th May 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)51.

13. The following are the original references for the names placed on the *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

aspera, *Trigonia*, Lamarck, 1819, *Hist. nat. Anim. sans Vertèbr.*

6 (1) : 63

margaritacea, *Trigonia*, Lamarck, 1804, *Ann. Mus. Hist. nat.*,
Paris 4 (23) : 355

Neotrigonia Cossmann, 1912, *Ann. Paléont.* 7 (2) : 81

nodulosa, *Trigonia*, Lamarck, 1801, *Syst. Anim. sans Vertèbr.* : 117

sulcata, *Venus*, Hermann, 1781, *Naturforscher* 15 : 127—129,
pl. IV, figs. 9, 10

Trigonia Bruguière, 1789, *Ency. méth.* (Vers) 1 (1) : xiv

14. The following is the reference to the place where a lectotype was first selected for the nominal species *Venus sulcata* Hermann, 1781 :—Cox, Sept. 1951, *Bull. zool. Nomencl.* 6 : 83. In the foregoing paper Dr. Cox mentioned that he had made this lectotype selection in a paper which was about to appear in the *Proceedings of the Malacological Society of London*. It has since been ascertained from Dr. Cox that the latter paper was not published until 9th January 1952, and therefore that the lectotype selection made in his paper in the *Bulletin of Zoological Nomenclature* has priority⁶.

15. The gender of the generic names *Trigonia* Bruguière, 1789, and *Neotrigonia* Cossmann, 1912, is feminine.

16. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has been ascertained that an addition, or

⁶ See footnote 2.

additions to the foregoing *Official List* and/or to the corresponding *Official Index of Rejected and Invalid Family-Group Names in Zoology* will need to be made in order to complete the action which, under the General Directives given to the International Commission by the International Congress of Zoology, is required to be taken in the present case. This question is now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

17. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

18. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

19. The present *Opinion* shall be known as *Opinion* Three Hundred and Twenty-Seven (327) of the International Commission on Zoological Nomenclature.

DONE in London, this Tenth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.,
Secretary to the Commission

VOLUME 9. Part 20. Pp. 299—308

OPINION 328

Suppression, under the Plenary Powers, of the specific name *caesius* Cloquet, 1818, as published in the combination *Coluber caesius*, for the purpose of validating the specific name *irregularis* Leach, 1819, as published in the combination *Coluber irregularis* (Class Reptilia, Order Squamata)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 328

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History),
Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent
re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 328

SUPPRESSION, UNDER THE PLENARY POWERS, OF THE SPECIFIC NAME "CAESIUS" CLOQUET, 1818, AS PUBLISHED IN THE COMBINATION "COLUBER CAESIUS", FOR THE PURPOSE OF VALIDATING THE SPECIFIC NAME "IRREGULARIS" LEACH, 1819, AS PUBLISHED IN THE COMBINATION "COLUBER IRREGULARIS" (CLASS REPTILIA, ORDER SQUAMATA)

RULING : (1) Under the Plenary Powers, the specific name *caesius* Cloquet, 1818, as published in the combination *Coluber caesius*, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(2) The locality for the nominal species *Dendrophis (Philothamnus) semivariiegata* Smith, 1847, is to be interpreted as restricted by Bogert, 1940, namely "Bushman Flat, Cape Province".

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 234 and 235 respectively :—(a) *irregularis* Leach, 1819, as published in the combination *Coluber irregularis* ; (b) *semivariiegata* Smith, 1847, as published in the combination *Dendrophis (Philothamnus) semivariiegata* (specific name of type species of *Philothamnus* Smith, 1847).

(4) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* as Name No. 796 :—*Philothamnus* Smith, 1847 (gender : masculine) (type species, by monotypy : *Dendrophis (Philothamnus) semivariiegata* Smith, 1847).

(5) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Name No. 109 :—*caesius* Cloquet, 1818, as published in the combination *Coluber caesius*, as suppressed, under the Plenary Powers, under (1) above.

I.—THE STATEMENT OF THE CASE

On 28th March 1951 Dr. Arthur Loveridge (*Museum of Comparative Zoology, Cambridge, Mass., U.S.A.*) submitted an application for the use of the Plenary Powers for the purpose of validating the specific name *irregularis* Leach, 1819, as published in the combination *Coluber irregularis*, as against the older name *caesius* Cloquet, 1818, as published in the combination *Coluber caesius*. This application as subsequently slightly revised, was as follows :—

Proposed use of the Plenary Powers to suppress the trivial name “caesius” Cloquet, 1818, as published in the binominal combination “Coluber caesius” (Class Reptilia, Order Squamata)

By ARTHUR LOVERIDGE

(*Museum of Comparative Zoology, Cambridge, Mass., U.S.A.*)

During the course of a revisionary study of the African Green snakes commonly referred to the genera *Chlorophis* Hallowell, 1857 (*Proc. Acad. nat. Sci. Philad.* 1857 : 53) and *Philothamnus* Smith, 1847 (*Ill. Zool. S. Afr. (Rept.)* : pl. lix), I find that the trivial name (*irregularis*) of the commonest and most widely distributed member of the genus *Chlorophis* is antedated.

2. The trivial name *irregularis* Leach, 1819 (*in* Bowditch, *Miss. Ashanti* : 494 “Fantee, Gold Coast”), as published in the binominal combination *Coluber irregularis*, has been almost consistently applied (in combination either with the name *Ahaetulla* or the name *Chlorophis* or the name *Philothamnus*) to this common reptile since 1858 (Günther), occurring 113 times in the literature.

3. However, the stability of the name of this species is threatened by the trivial name *caesius* Cloquet, 1818 (*Dict. Sci. nat.*, Paris 11 : 201 "Region of Cape Verde"), as published in the binominal combination *Coluber caesius*, a name which has never been used by anyone, other than its original author Cloquet. The description of *caesius* conforms to that of *irregularis* in all respects, except that the number of its subcaudals is given as sixty-four, whereas the range for *irregularis* is from 97 to 121. I suggest that the tail of the type specimen of *caesius* was truncated, for quite a high percentage of these whip-tailed tree snakes lose the ends of their tails during life. When such a loss occurs early in life, the tail heals over and the terminal point is reproduced, so that the tail closely resembles its original condition.

4. In further support of the identification of *caesius* with *irregularis*, we have to note that, with the possible exception of *semivariegata* Smith, 1847 (*Dendrophis (Philothamnus) semivariegata* Smith, 1847, *Ill. Zool. S. Afr.* (Rept.) : pls. lix, lx, lxiv, figs. 1a—b "Bushman Flat, Cape Province") *irregularis* is the only species of the genus which extends so far west as the region of Cape Verde, the type locality of *caesius*.

5. In order to avoid the quite unnecessary confusion and instability which would result from the substitution of the entirely unknown name *caesius* Cloquet for the universally accepted name *irregularis* Leach, I ask the International Commission on Zoological Nomenclature :—

- (1) to use its Plenary Powers to suppress the trivial name *caesius* Cloquet, 1818, as published in the combination *Coluber caesius*, for the purposes of the Law of Priority but not for those of the Law of Homonymy ;
- (2) to place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology* :—
 - (a) *irregularis* Leach, 1819, as published in the combination *Coluber irregularis* ;
 - (b) *semivariegata* Smith, 1847, as published in the combination *Dendrophis (Philothamnus) semivariegata*, the type locality of the species so named to be interpreted as specified by Bogert, 1940 (*Bull. amer. Mus. nat. Hist.* 77 : 56) (trivial name of type species of *Philothamnus* Smith, 1847) ;
- (3) to place the generic name *Philothamnus* Smith, 1847 (gender : masculine) (type species, by monotypy : *Dendrophis (Philothamnus) semivariegata* Smith, 1847) on the *Official List of Generic Names in Zoology* ;

- (4) to place the trivial name *caesius* Cloquet, 1818, as published in the combination *Coluber caesius*, as proposed, in (1) above, to be suppressed under the Plenary Powers, on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Dr. Loveridge's letter of 28th March 1951, the question of the possible use of the Commission's Plenary Powers for the purpose of preserving the specific name *irregularis* Leach, 1819, as published in the combination *Coluber irregularis*, was allotted the Registered Number Z.N.(S.) 531.

3. Publication of the present application : The present application was sent to the printer in May 1951 and was published on 28th September of that year in Part 3 of volume 6 of the *Bulletin of Zoological Nomenclature* (Loveridge, 1951, *Bull. zool. Nomencl.* 6 : 88—89).

4. Supplementary Note furnished by Dr. Loveridge : In a letter dated 11th May 1951, Dr. Loveridge furnished the following supplementary note on the distribution of *Coluber irregularis* Leach, 1819 : " Since filing my application, I have borrowed two snakes from Dakar, Senegal, that appeared as *P. semivariegatus* in the literature. Both proved to be *irregularis*, i.e. topotypes of *caesius* ".

5. Issue of Public Notices : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 50—56), Public Notice of the possible use by the International Commission on

Zoological Nomenclature of its Plenary Powers in the present case was given on 28th September 1951, both in Part 3 of volume 6 of the *Bulletin of Zoological Nomenclature* (the Part in which Dr. Loveridge's application was published) and also to the other prescribed serial publications. The publication of these Notices elicited no objection to the action proposed.

6. Support received from Professor Dr. R. Mertens (Natur-Museum u. Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a. M., Germany) : On 24th October 1951, Professor Dr. R. Mertens (*Natur-Museum u. Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a. M., Germany*) addressed to the Commission the following letter in support of Dr. Loveridge's application (1952, *Bull. zool. Nomencl.* 6 : 224) :—

Ich schliesse mich den Ausführungen des herrn A. Loveridge an und befürworte seinen Antrag um Unterdrückung des Artnamens *caesius* Cloquet. Auch stimme ich seinen Vorschlägen um Aufnahme der von ihm erwähnten Artnamen *irregularis* und *semivariiegata* in die *Official List of Specific Trivial Names in Zoology* und des Gattungsnamens *Philothamnus* in die *Official List of Generic Names in Zoology* bei.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

7. Issue of Voting Paper V.P.(52)53 : On 22nd May 1952, a Voting Paper (V.P.(52)53) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the trivial name *caesius*, Cloquet, 1818, as published in the combination *Coluber caesius*, as set out in Points (1) to (4) on page 89 in volume 6 of the *Bulletin of Zoological Nomenclature*" [*i.e.* in paragraph 5 of the application reproduced in the first paragraph of the present *Opinion*].

8. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August 1952.

9. Particulars of the Voting on Voting Paper V.P.(52)53 : The state of the voting on Voting Paper V.P.(52)53 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ; Vokes ;
Pearson ; do Amaral ; Hemming ; Biadley ; Esaki ;
Riley ; Lemche ; Mertens ; Stoll ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned, two (2) :*

Cabrera¹ ; Jaczewski.

10. Declaration of Result of Vote : On 23rd August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)53, signed a Certificate that the Votes cast were as set out in paragraph 9 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

11. On 10th May 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)53.

¹ After the close of the Prescribed Voting Period, an affirmative vote was received (on 1st September, 1952) from Commissioner Cabrera.

12. The following are the original references for the names placed on the *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

caesius, *Coluber*, Cloquet, 1818, *Dict. Sci. nat.*, Paris 11 : 201
irregularis, *Coluber*, Leach, 1819, in Bowditch, *Miss. Ashanti* : 494
Philothamnus Smith, 1847, *Ill. Zool. S. Afr.* (Rept.) : pl. lix
semivariiegata, *Dendrophis (Philothamnus)*, Smith, 1847, *Ill. Zool. S. Afr.* : pls. lix, lx, lxiv, figs. 1a—b

13. The following is the reference to the publication of the restricted locality (1953, *Copenhagen Decisions zool. Nomencl.* : 26—27, Decision 31) of “Bushman Flat, Cape Province” for the nominal species *Dendrophis (Philothalmus) semivariiegata* Smith, 1847, specified in the Ruling given in the present *Opinion* :—Bogert, 1940, *Bull. amer. Mus. nat. Hist.* 77 : 56.

14. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

15. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression “trivial name” and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word “trivial” appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression “specific name” was substituted for the expression “trivial name” and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

16. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

17. The present *Opinion* shall be known as *Opinion* Three Hundred and Twenty-Eight (328) of the International Commission on Zoological Nomenclature.

DONE in London, this Tenth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 23. Pp. 309—320

OPINION 329

Acceptance for nomenclatorial purposes of the work
by Giovanni Antonio Scopoli entitled *Introductio ad
Historiam Naturalem* published in 1777



LONDON :

Printed by Order of the International Trust for
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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 329

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*).

- Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).
- Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).
- Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).
- Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).
- Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).
- Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).
- Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).
- Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).
- Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).
- Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).
- Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).
- Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).
- Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).
- Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).
- Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).
- Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).
- Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).
- Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 329

ACCEPTANCE FOR NOMENCLATORIAL PURPOSES OF THE WORK BY GIOVANNI ANTONIO SCOPOLI ENTITLED "INTRODUCTIO AD HISTORIAM NATURALEM" PUBLISHED IN 1777

RULING : (1) It is hereby ruled that in the work entitled *Introductio ad Historiam Naturalem* published in 1777 Giovanni Antonio Scopoli duly applied the principles of binominal nomenclature and therefore that new names published in the foregoing work possess rights under the Law of Priority in virtue of having published therein.

(2) The title of the work specified in (1) above is hereby placed on the *Official List of Works Approved as Available for Zoological Nomenclature* with the Title No. 11.

I.—THE STATEMENT OF THE CASE

On 4th August 1951, Mr. Francis Hemming, as Secretary, submitted an application to the Commission for a Ruling on the question of whether in the work entitled *Introductio ad Historiam Naturalem* published in 1777 Scopoli (G.A.) had applied the principles of binominal nomenclature and therefore whether new names published in this work possessed a status of availability in virtue of having been so published. This question had long

called for a decision in view of the large number of generic names in common use accepted with priority as from Scopoli's *Introductio*. In addition, from the point of view of the work of the Commission, this question possessed a special urgency, since it was the lack of a decision on this matter which had prevented the Commission in its *Opinion* 160 from giving more than an interim Ruling on the question of the availability of the generic name *Anguina* Scopoli, 1777. At that time, the postponement of a decision on this question was inevitable owing to the doubts which then existed in regard to the meaning to be attached to the expression "nomenclature binaire" as used in Proviso (b) to Article 25 of the *Règles*, but the settlement of this question by the Thirteenth International Congress of Zoology, Paris, 1948, cleared the way for a decision on the question of the availability of Scopoli's *Introductio* and therefore for a substantive decision regarding the status of the name *Anguina* Scopoli¹. The application submitted by Mr. Hemming on the general issue discussed above was as follows :—

**On the nomenclatorial status of names published in 1777 in the
"Introductio ad Historiam Naturalem" of Giovanni Antonio Scopoli**

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

1. At its Session held in Lisbon in September 1935 (Lisbon Session, 4th Meeting Conclusion 11) the International Commission on Zoological Nomenclature had under consideration an application submitted by Dr. B. G. Chitwood (Bureau of Animal Industry, U.S. Department of Agriculture, Washington, D.C.) jointly with four other specialists (all of the U.S. Department of Agriculture), the central feature of this application being the question whether the generic name *Anguina* Scopoli, 1777, published in the foregoing work, was or was not an available name. The point at issue was whether in the *Introductio* Scopoli had applied the "principes de la nomenclature

¹ Proposals for a settlement of the problems associated with the name *Anguina* Scopoli, 1777, were submitted to the Commission on 27th February, 1954 in Voting Paper V.P.(54)15. At the close of the Prescribed Voting Period it was found that these proposals had been unanimously approved by the Commission. The decision so taken was at once embodied in *Opinion* 341 (now in the press).

binaire", as then required by Article 25 of the *Règles*. At that time the meaning to be attached to the foregoing expression was the subject of keen debate, some authors claiming that it was identical in meaning with the expression "nomenclature binominale", others that it had a wider meaning. Pending a decision by the International Congress of Zoology on the question of principle involved, all that it was possible for the Commission to do in regard to the application submitted by Dr. Chitwood and his colleagues was to rule that "for so long as names published by authors using a binary, though not binominal, system of nomenclature were recognised as complying with the requirements of Article 25 of the International Code, the generic names published in . . . the *Introductio* . . . should be accepted as available nomenclatorially, but that the position should be re-examined if later it were decided to reject generic names published by authors not applying the binominal system" (1943, *Bull. zool. Nomencl.* 1 : 37—38). In 1943 the foregoing decision was formally embodied in an *Opinion* (*Opinion* 160) which was published two years later (1945, *Opin. Decl. int. Comm. zool. Nomencl.* 2 : 291—306).

2. The next event bearing on the present problem occurred in 1943 when Mr. R. Winckworth submitted an application to the International Commission on Zoological Nomenclature, asking for a ruling on the question whether the work by Martin Thrane Brünnich entitled *Zoologiae Fundamenta*, then believed to have been published in 1772 (but later found to have been published in 1771), satisfied the requirements of Proviso (b) to Article 25 of the *Règles*. Mr. Winckworth pointed out in his application that Brünnich's *Fundamenta* was (as its title indicated) an introduction to zoology, that it dealt with taxonomic categories down to, and including, the genus-level, but out of considerations of time and space did not attempt to list the species referable to the genera recognised ("Enumeratio specierum nimis foret proluxa."). The only point raised was whether the failure by an author to deal with species, brought his work outside the scope of Proviso (b) to Article 25 (the proviso which then made the availability of a name depend upon the application by its author of the "principes de la nomenclature binaire"); for there was nothing to suggest that, if Brünnich's *Fundamenta* had been designed to deal with species as well as higher taxonomic categories, he would not have applied the principles of binominal nomenclature. It was immediately evident that the problem presented by Brünnich's *Fundamenta* was identical with that raised by Scopoli's *Introductio*, for each of these works was a general textbook of (or introduction to) zoology and in each the author dealt with the various taxonomic categories down to the genus-level but no further, Brünnich citing no species, Scopoli only occasionally citing species, employing when he cited a specific name, otherwise than in a quotation, a strictly binominal system of nomenclature.

3. At its Session held in Paris the International Commission on Zoological Nomenclature (1950, *Bull. zool. Nomencl.* 4 : 63—66)

proposed, and the Thirteenth International Congress of Zoology agreed, that the expression "nomenclature binaire" as hitherto used in the *Règles* had the same meaning as the expression "nomenclature binominale" and substituted the latter expression for the former, wherever it had till then occurred in the *Règles* (i.e. in Articles 25 and 26). This decision cleared up one of the questions which were doubtful at the time when the International Commission rendered its *Opinion* 160 (in regard to the name *Anguina* Scopoli, 1777). As we have seen, however, (paragraph 2) a decision on this question of principle was not itself sufficient to provide an answer to the problem raised by Scopoli's *Introductio* of 1777 and by Brünnich's *Fundamenta*, for that problem was not whether Scopoli and Brünnich were binominal authors—there was never any doubt on that score—but whether a binominal author should be held to have complied with the requirements of Proviso (b) to Article 25, i.e. whether he was to be regarded as having "appliqué les principes de la nomenclature binominale" (formerly "binaire") if in the work in question he dealt with zoological systematic categories, down to, but not including, the species level.

4. At its Paris Session also, the International Commission dealt with the application submitted by Mr. Winckworth in regard to the status of new names as published in Brünnich's *Fundamenta* of 1771 (Paris Session, 12th Meeting, Conclusion 2). In accordance with the principle laid down at Lisbon in 1935 (1943, *Bull. zool. Nomencl.* 1 : 40) the International Commission decided first the question of principle involved and, having done so, applied the decision so reached to the particular case of Brünnich's *Fundamenta*. On the question of principle, the International Commission agreed (1950, *Bull. zool. Nomencl.* 4 : 309) "that, where, prior to 1st January 1931, an author had published a new generic name in a work dealing with classification down to the generic level but no further, it was not necessary for the purpose of Proviso (b) to Article 25 that in the work concerned the author in question should have cited trivial names of species under that genus or other genera discussed in the book concerned, provided that it was evident that the author concerned would have applied the principles of binominal nomenclature for species if in the book concerned he had dealt with taxonomic units below the genus-level". In the light of the foregoing decision the International Commission agreed (1950, *ibid.* 4 : 309—310) "to render an *Opinion* stating that, for the reasons given above, the generic names published in Brünnich, 1771, *Zoologiae Fundamenta* complied with the requirements of Article 25 of the *Règles*".

5. The decision taken by the International Commission in regard to the status of new generic names in Brünnich's *Fundamenta* provides a clear guide for settling the problem of the availability of new generic names in Scopoli's *Introductio* of 1777, for the features presented by that work are indistinguishable from those presented by Brünnich's *Fundamenta*. The stage has therefore now been reached when the

Commission is in a position, in accordance with its announced intention, to complete the consideration of the questions raised, but (at that time unavoidably) left unanswered in its *Opinion* 160 regarding the name *Anguina* Scopoli, 1777, and associated problems. It is accordingly recommended that, in pursuance of the decision on procedure announced in *Opinion* 160 and in the light of the decision of principle taken at the time when the status of the names in Brünnich's *Fundamenta* was settled, the International Commission on Zoological Nomenclature should now give a ruling that in the *Introductio ad Historiam naturalem* of 1777 Scopoli complied with the requirements of Article 25 and therefore that new names published in the above work, if not homonyms or objective synonyms of older names, are themselves available names.

6. The need for a decision in regard to this matter is extremely urgent, for over the nomenclature of wide areas of the Animal Kingdom the generic names first published in 1777 in Scopoli's *Introductio* are in current use, but, pending the completion of *Opinion* 160, are liable to challenge with a consequent risk of confusion and unnecessary name-changing. The nomenclature used in Scopoli's *Introductio* is of direct concern, not merely to specialists in one particular Order (where the specialists concerned are at least aware of the nomenclatorial practice in regard to that book adopted by other specialists in that group), but also to specialists in widely separated groups. It may be found, therefore, that in some groups generic names first published in the *Introductio* are not currently in use, specialists in the groups concerned having proceeded on the assumption that the names in question were not available under Article 25 of the *Règles*. In so far as this may prove to be the case, it would clearly be appropriate to apply the general principle laid down by the International Congress of Zoology (1950, *Bull. zool. Nomencl.* 4 : 65) that special consideration should be given to any cases where, as the result of the decision clarifying the meaning of the expression "nomenclature binaire" then taken, a well-known and well-established name was found to be invalid. It is accordingly recommended that, when taking the decision suggested at the end of paragraph 5 of the present application, the International Commission on Zoological Nomenclature should indicate its willingness to give sympathetic consideration to any application which may be submitted to it for the validation of a well-established generic name now found to be either an objective or subjective junior synonym of a generic name published in 1777 in Scopoli's *Introductio* but not currently in use.

7. A decision on the question now submitted to the International Commission will not finally dispose of the matters left undecided in *Opinion* 160 ; since for this purpose it will be necessary for the Commission to decide whether the name *Anguina* Scopoli, 1777, is to be placed on the *Official List of Generic Names in Zoology* or whether some other name should be accepted for the genus concerned. The views of specialists in the Nematoda are being sought on this question,

which, when sufficient information has been collected, will be submitted to the International Commission for decision.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Mr. Hemming's application, the question of the availability of names published in 1777 in Scopoli's *Introductio* was allotted the Registered Number Z.N.(S.) 587.

3. Publication of the present application : In order to expedite the substitution of a substantive decision in regard to the name *Anguina* Scopoli, 1777 for the interim Ruling given in *Opinion* 160, the present application was sent to the printer immediately upon its having been received, and it was published on 28th September 1951 in Part 4 of volume 6 of the *Bulletin of Zoological Nomenclature* (Hemming, 1951, *Bull. zool. Nomencl.* 6 : 122—125).

4. Support received from Professor George S. Myers (Stanford University, Natural History Museum, Stanford, California, U.S.A.): In a letter dated 29th January 1952 Professor George S. Myers (*Stanford University, Natural History Museum, Stanford, California, U.S.A.*) intimated his support for the present application as follows (Myers, 1952, *Bull. zool. Nomencl.* 6 : 255) :—

I have noticed in a recent issue of the *Bulletin* (Hemming, 1951, *Bull. zool. Nomencl.* 6 (4) : 122—125) a discussion of some of the generic names proposed by Scopoli, 1777, *Introductio ad Historiam naturalem*. It seemed to me that some feeling was shown that Scopoli should be nomenclaturally outlawed. This would be catastrophic in ichthyology, where the outlawing of Scopoli's names would mean the replacement of a number of very important generic names. The more important Scopolian fish names are : **Liparis*, **Umbra*, **Clarias*, **Percis*, **Anableps*, **Pholis*, **Erythrinus*, **Anostomus*, **Mastacembelus*, **Synodus*, **Mystus*, **Channa*, **Holocentrus*, **Callichthys*, **Gonorhynchus*, **Aprredo*, **Albula*, **Charax*.

An asterisk indicates that the name is the type genus of a currently recognised family. Some of these families are large and important.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

5. Issue of Voting Paper V.P.(52)59 : On 22nd May 1952, a Voting Paper (V.P.(52)59) was issued in which the Members of the Commission were invited to vote either for, or against, "the proposal set forth at the foot of the present Voting Paper relating to the availability of names published in Scopoli, 1777, *Introductio ad Historiam Naturalem*, which has been prepared in the light of the discussion on pages 122 to 125 of volume 6 of the *Bulletin of Zoological Nomenclature*" [*i.e.* in the application reproduced in the first paragraph of the present *Opinion*]. The proposition on which, as explained in the foregoing Voting Paper, the Members of the International Commission were then asked to vote was as follows:—"In accordance with the principles laid down by the Thirteenth International Congress of Zoology, Paris, 1948, when considering the status of names in Brünnich, 1771, *Zoologiae Fundamenta* (1950, *Bull. zool. Nomencl.* 4 : 309, Points (1) and (2)), Scopoli (G.A.) is to be treated as having applied the principles of binominal nomenclature in the work entitled *Introductio ad Historiam Naturalem* published in 1777".

6. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August 1952.

7. Particulars of the Voting on Voting Paper V.P.(52)59 : The state of the voting on Voting Paper V.P.(52)59 at the close of the Prescribed Voting Period was as follows:—

(a) *Affirmative Votes had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received) :*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ; Vokes ;
Bradley ; do Amaral ; Hemming ; Esaki ; Riley ;
Lemche ; Pearson ; Stoll ; Boschma ;

(b) *Negative Votes* :

None ;

(c) *Voting Papers not returned, three (3)* :

Cabrera² ; Jaczewski ; Mertens.

8. Declaration of Result of Vote : On 23rd August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)59, signed a Certificate that the Votes cast were as set out in paragraph 7 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

9. At its meeting held at Copenhagen in August 1953, the Fourteenth International Congress of Zoology decided to insert a provision in the *Règles* establishing an "Official List" to be styled the *Official List of Works Approved as Available for Zoological Nomenclature* and directing the insertion therein of the title of any work which the International Commission might either validate under its Plenary Powers or declare to be available under the *Règles* for the purposes of zoological nomenclature (1953, *Copenhagen Decisions zool. Nomencl.* : 24). Since the foregoing provision applies to past, as well as to future, decisions by the International Commission in cases of this kind, the opportunity presented by the preparation of the present *Opinion* has been taken to record the insertion in the foregoing *Official List* of the title of the work which forms the subject of the present *Opinion*.

10. On 12th May 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a

² After the close of the Prescribed Voting Period, an affirmative vote was received (on 1st September 1952) from Commissioner Cabrera.

Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)59, as supplemented by the action required to conform with the decision of the Fourteenth International Congress of Zoology, Copenhagen, 1953, as specified in the immediately preceding paragraph.

11. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

12. The present *Opinion* shall be known as *Opinion* Three Hundred and Twenty-Nine (329) of the International Commission on Zoological Nomenclature.

DONE in LONDON, this Twelfth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

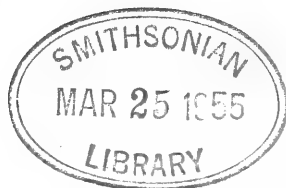
FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 24. Pp. 321—338

OPINION 330

Validation, under the Plenary Powers, of the generic names *Ligia* Fabricius, 1798 (Class Crustacea, Order Isopoda) and *Carcinus* Leach, 1814 (Class Crustacea, Order Decapoda)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 330

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History),
Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(*arranged in order of precedence by reference to date of election or of most recent
re-election, as prescribed by the International Congress of Zoology*).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948)

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 330

VALIDATION, UNDER THE PLENARY POWERS, OF THE GENERIC NAMES "LIGIA" FABRICIUS, 1798 (CLASS CRUSTACEA, ORDER ISOPODA), AND "CARCINUS" LEACH, 1814 (CLASS CRUSTACEA, ORDER DECAPODA)

RULING :—(1) Under the Plenary Powers, (a) the under-mentioned generic names are hereby suppressed both for the purposes of the Law of Priority and for those of the Law of Homonymy :—(i) *Ligia* Weber, 1795, (ii) *Carcinus* Latreille, 1796, and (b) the under-mentioned generic names are hereby validated :—(i) *Ligia* Fabricius, 1798, (ii) *Carcinus* Leach, 1814.

(2) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* as Name Nos. 797 and 798 respectively :—(a) *Ligia* Fabricius, 1798 (gender : feminine) (type species, by selection by Latreille (1810) : *Oniscus oceanicus* Linnaeus, 1767) ; (b) *Carcinus* Leach, 1814 (gender : masculine) (type species, by monotypy : *Cancer maenas* Linnaeus, 1758).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 236 and 237 respectively :—(a) *maenas* Linnaeus, 1758, as published in the combination *Cancer maenas* (specific name of type species of *Carcinus* Leach, 1814) ; (b) *oceanicus* Linnaeus, 1767, as published in the combination *Oniscus oceanicus* (specific name of type species of *Ligia* Fabricius, 1798).

(4) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name Nos. 207 to 209

respectively :—(a) *Ligia* Weber, 1795 (as suppressed, under the Plenary Powers, under (1)(a)(i) above) ; (b) *Carcinus* Latreille, 1796 (as suppressed, under the Plenary Powers, under (1)(a)(ii) above) ; (c) *Carcinides* Rathbun, 1897 (a junior objective synonym of *Carcinus* Leach, 1814).

I.—THE STATEMENT OF THE CASE

On 11th January 1946, Miss A. M. Buitendijk and Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) submitted to the Commission (through Professor H. Boschma, Director of the Museum) an application for the use of the Plenary Powers for the purpose of providing a valid basis for the use of the name *Ligia* Fabricius, 1798, as against its senior homonym *Ligia* Weber, 1795. For the reasons explained in paragraph 4 below it was necessary later to revise and expand this application in certain respects. The application so revised was as follows :—

Proposed validation, under the Plenary Powers, of the generic names
 “*Ligia*” Fabricius, 1798 (Class Crustacea, Order Isopoda) and
 “*Carcinus*” Leach, 1814 (Class Crustacea, Order Decapoda)

By ALIDA M. BUITENDIJK and L. B. HOLTHUIS
 (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*)

The object of the present application is to secure authority from the International Commission on Zoological Nomenclature for the continued use of the well-known generic names *Ligia* Fabricius, 1798 (Class Crustacea, Order Isopoda) and *Carcinus* Leach, 1814 (Class Crustacea, Order Decapoda) in their accustomed sense.

2. Rathbun pointed out in 1904 (*Proc. biol. Soc. Wash.* **17** : 172), that the generic name *Ligia* Weber, 1795 (*Nomencl. ent.* : 92

preoccupies, and therefore renders invalid, the generic name *Ligia* Fabricius, 1798 (*Suppl. Ent. syst.* : 296, 301). Weber in his list of names—he gave no descriptions—was the first author to publish the name *Ligia*. In using this name, he cited with it the name *Cancer*, which he placed in brackets (parentheses), to indicate that the species placed by him in the genus *Ligia* were referred by Fabricius to the genus *Cancer* Linnaeus. Under the generic name *Ligia*, Weber cited three specific names, namely *Ligia inflexa*, *Ligia 3-cuspitata* and *Ligia granaria*. The first two of these specific names were at that time *nomina nuda*, but the trivial name (*granaria*) comprised in the third of these names had already been published, in the binominal combination *Cancer granarius*, by Herbst in 1783 (*Versuch einer Naturgeschichte der Krabben und Krebse* 1 : 107, pl. 2, fig. 28); this name had been referred to also by Fabricius in 1793 (*Ent syst.* 2 : 442). We see therefore that at the time when Weber first published the generic name *Ligia*, he cited under that name the trivial name of only one previously described and named species, viz. *Cancer granarius* Herbst, 1783. That species is therefore the type species of the genus *Ligia* Weber, 1795, by monotypy.

3. The nominal species *Cancer granarius* Herbst, 1783, was based upon the “langwerpig-vierkante Zee-Krabbe” of Slabber (1769—1778, *Naturkuundige Verlustigingen* : 159, pl. 18, Fig. 1), since Herbst's figure is a copy of that given by Slabber, and his description of this species is an abbreviated translation of Slabber's Dutch text. It is now known that Slabber's “species” (and therefore Herbst's) is merely the megalopa stage of the common shore crab *Carcinus maenas* (Linnaeus, 1758) (= *Cancer maenas* Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 627). From the taxonomic standpoint, the genus *Ligia* Weber, 1795, is identical with the genus *Carcinus* Leach, 1814, and accordingly the name *Carcinus* Leach is a subjective junior synonym of, and falls to, the name *Ligia* Weber. After Weber (1795) the generic name *Ligia* was never used for a genus of Brachyura. On the other hand the generic name *Carcinus* came into general use for the extremely common shore crab (*Cancer maenas* Linnaeus) from the coasts of the North Atlantic.

4. The name *Ligia* Fabricius, 1798, was published by that author for a genus of Isopods, represented by *Oniscus oceanicus* Linnaeus, 1767 (*Syst. Nat.* (ed. 12) 1 : 1061), which was selected as the type species of this genus by Latreille in 1810 (*Consid. gén. Anim. Crust. Arach. Ins.* : 423). It has ever since been generally used by authors in this sense up to the time of the publication of Rathbun's paper in 1904. Since then, it has been discarded by some American authors in favour of the name *Ligyda* Rafinesque, 1815 (*Analyse Nature* : 101). This name is quite unfamiliar to European authors, while at least one American author (W. G. van Name), who for a time used this name, later (1936) reverted to the name *Ligia* Fabricius in his monographic work, “The American

Land and Fresh-water Isopod Crustacea" (*Bull. Amer. Mus. nat. Hist.* 71).

5. In the light of the considerations advanced above, it is considered most advisable—in view of the enormous confusion which otherwise is inevitable—that the Commission should suppress, under its Plenary Powers, the generic name *Ligia* Weber, 1795, and should validate the generic name *Ligia* Fabricius, 1798, with *Oniscus oceanicus* Linnaeus, 1767, as its type species (by subsequent selection by Latreille (1810)) and should place this name, so validated, on the *Official List of Generic Names in Zoology*.

6. The adoption of the foregoing proposal, by eliminating the name *Ligia* Weber, 1795, will serve the further important purpose of removing one of the two causes which at present invalidate the well-known and still commonly used generic name *Carcinus* Leach, 1814 (*in* Brewster's *Edinburgh Ency.* 7 : 390) (type species, by monotypy : *Cancer maenas* Linnaeus, 1758). Before, however, the name *Carcinus* Leach could become the valid generic name for the common shore crab, it would be necessary for the Commission to use its Plenary Powers to suppress the earlier name *Carcinus* Latreille, 1796 (*Précis Caract. génér. Ins.* : 197), which, as pointed out by Rathbun in 1897 (*Proc. biol. Soc. Wash.* 11 : 164), at present makes Leach's generic name *Carcinus* an invalid junior homonym. On the authority of Stebbing (1888, *Rep. Voy. Challenger*, Zool. 29 : 1669), we may conclude that the genus *Carcinus* Latreille, in the original description of which no species was cited by name, is synonymous with *Gammarus* Fabricius, 1775 (*Syst. Ent.* : 418), and thus belongs to the Amphipoda. The name *Carcinus* Latreille has never been used by any subsequent author, and its suppression under the Plenary Powers would therefore encounter no difficulty whatever.

7. Rathbun's re-discovery (1897) of the long-neglected name *Carcinus* Latreille, 1796, and, more particularly, her substitution (1897) of the new generic name *Carcinides* Rathbun for the generic name *Carcinus* Leach for the common shore crab, led to a break in the uniformity of the practice of carcinologists in naming the common shore crab ; some authors (*e.g.*, Pesta ; Monod) followed Rathbun in discarding the name *Carcinus* Leach in favour of the name *Carcinides* Rathbun, 1897 ; while others (*e.g.*, Bouvier, Lebour, Gurney, Balas) continued to use the name *Carcinus* Leach, notwithstanding the fact that, as rightly pointed out by Rathbun, this name is invalid. That, in spite of this, the name *Carcinus* Leach has continued to be used by the great majority of carcinologists—only a few using the name *Carcinides*—is striking evidence of the general reluctance to abandon the use of this name.

8. In order to prevent the great confusion which would follow the strict application of the *Règles* in the present case, and to put an end to such confusion as has already arisen through the adoption by a limited number of workers, of the changes recommended by Rathbun, we ask the International Commission on Zoological Nomenclature :

(1) to use its Plenary Powers :—

(a) to suppress the under-mentioned generic names both for the purposes of the Law of Priority and for those of the Law of Homonymy :—

(i) *Ligia* Weber, 1795 ;

(ii) *Carcinus* Latreille, 1796 ;

(b) to validate the under-mentioned generic names :—

(i) *Ligia* Fabricius, 1798 ;

(ii) *Carcinus* Leach, 1814 ;

(2) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology*, with the type species severally specified below :—

(a) *Ligia* Fabricius, 1798 (type species, by selection by Latreille, 1810 : *Oniscus oceanicus* Linnaeus, 1767) (gender of generic name : feminine) ;

(b) *Carcinus* Leach, 1814 (type species, by monotypy : *Cancer maenas* Linnaeus, 1758) (gender of generic name : masculine) ;

(3) to place the under-mentioned generic names, proposed in (1)(a) above to be suppressed under the Plenary Powers, on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

(a) *Ligia* Weber, 1795 (suppressed under (1)(a)(i) above) ;

(b) *Carcinus* Latreille, 1796 (suppressed under (1)(a)(ii) above) ;

(c) *Carcinides* Rathbun, 1897 (an objective synonym of *Carcinus* Leach, 1814) ;

(4) to place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology* :—

(a) *maenas* Linnaeus, 1758, as published in the binominal combination *Cancer maenas* ;

(b) *oceanicus* Linnaeus, 1767, as published in the binominal combination *Oniscus oceanicus*.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of the application prepared by Miss Buitendijk and Dr. Holthuis, the problem of the status to be accorded to the generic name *Ligia* Fabricius, 1798, was allotted the Registered Number Z.N.(S.) 209.

3. Application subsequently submitted independently by Dr. Poul Heegaard (then of the University of Copenhagen, Denmark) : On 29th March 1949 Dr. Poul Heegaard (then of the *University of Copenhagen*) submitted to the Commission (through Dr. Henning Lemche, the Danish Member of the Commission) an application relating to the name *Ligia* Fabricius, 1798, which he had prepared without knowing that this question had already been placed before the Commission by Miss Buitendijk and Dr. Holthuis. On being informed of this earlier application, Dr. Heegaard intimated his desire to withdraw his own application on this subject and to replace it with a note supporting the Buitendijk/Holthuis application. The note of support so submitted by Dr. Heegaard (under cover of a letter dated 24th November 1950) was as follows :—

In March 1949, I submitted to the International Commission on Zoological Nomenclature an application that it should use its Plenary Powers in order to prevent the confusion which would be inevitable if the *Règles* were to be strictly applied to the generic name *Ligia*, in view of the fact that the name *Ligia* Fabricius, 1798, is an invalid junior homonym of the name *Ligia* Weber, 1795, for this would mean that the name *Ligia* which for 150 years has been almost universally applied to an extremely well-known genus of Isopods, could no longer be applied in this way.

I have been informed by the Secretary to the International Commission that in January 1946, the Commission received an identical application from Dr. A. M. Buitendijk and Dr. L. B. Holthuis, of the Rijksmuseum van Natuurlijke Historie, Leyden, and that this application will be published as soon as possible in the *Bulletin of Zoological Nomenclature*, with a view to an early decision being taken by the International Commission on this important question. The Secretary to the Commission has communicated to me a copy of the joint application prepared by Dr. Buitendijk and Dr. Holthuis, with which

I find myself in complete agreement. Accordingly, instead of myself submitting an application on this case, I desire fully to associate myself with, and to support, the joint application referred to above.

4. Revision of the application submitted by Miss Buitendijk and Dr. Holthuis : Correspondence took place between the Secretary and Miss Buitendijk in 1946, and between the Secretary and Dr. Holthuis in 1950 on the form and scope of the application to be submitted to the Commission, the object of this correspondence being, partly, to ensure that the application should cover all aspects of the case and, partly, that it should comply with the requirements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948, in regard to the placing of names on *Official Lists* and *Official Indexes*. The application so revised was submitted to the Commission on 24th November 1950.¹

5. Publication of the present application : The present application and Dr. Heegaard's statement of support were sent to the printer in December 1950 and were published on 20th April 1951 in Part 4 of volume 2 of the *Bulletin of Zoological Nomenclature* (Buitendijk and Holthuis, 1951, *Bull. zool. Nomencl.* **2** : 99—101 ; Heegaard, 1951, *ibid.* **2** : 102).¹

6. Issue of Public Notices : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 50—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature in the present case was given on 20th April 1951, both in Part 4 of volume 2 of the *Bulletin of Zoological Nomenclature* (the Part in which the present application was published) and also to the other prescribed serial publications.

7. Comments received : The publication of the present application in the *Bulletin* and the concurrent issue of the Public Notices referred to above elicited comments from the under-mentioned specialists :—(1) A. Vandel (*Toulouse*) ; (2) R. Ph. Dollfus (*Paris*) ; (3) H. Balss (*München*) ; (4) E. Sollaud (*Lyon*) ; (5)

¹ For the application so revised see paragraph 1 of the present *Opinion*.

R. Zariquiey (*Barcelona*) ; (6) C. H. Blake (*Cambridge, Mass.*) ; (7) H. Strouhal (*Vienna*) ; (8) Miss I. Gordon (*London*). The communications so received are reproduced in the immediately following paragraphs.

8. Support received from Professor A. Vandel (Laboratoire de Zoologie, Université de Toulouse, France) : On 6th June 1951 Professor A. Vandel (*Laboratoire de Zoologie, Université de Toulouse, France*) addressed a letter to the Commission dealing, *inter alia*, with the present application, commenting on it as follows (Vandel, 1951, *Bull. zool. Nomencl.* **2** : 345) :—

Ligia. Entièrement d'accord avec feu Mlle. A. M. Buitendijk et M. L. B. Holthuis, et Paul Heegaard.—Il conviendrait seulement d'ajouter que cette question de nomenclature avait été déjà très nettement exposé et résolué dans le même sens par Fr. Dahl (1916, *Die Asseln oder Isopoden Deutschlands*, Jena : 32).

9. Comment received from Professor R. Ph. Dollfus (Muséum National d'Histoire Naturelle, Paris) : On 25th June 1951, Professor R. Ph. Dollfus (*Muséum National d'Histoire Naturelle, Paris*) addressed a letter to the Commission commenting upon a number of recently published applications. The portion of Professor Dollfus' letter relating to the present application was as follows :—

Je suis partisan de valider *Ligia* Fabricius, 1798 (type : *oceanica*).
Je suis partisan de valider *Carcinides* Rathbun, 1897 (type : *maenas*).

10. Support received from Dr. Heinrich Balss (Hauptkonservator der Zoologischen Staatssammlung, München, Germany) : On 6th July 1951, Dr. Heinrich Balss (*Hauptkonservator der Zoologischen Staatssammlung, München, Germany*) addressed the following letter to the Commission intimating his support for the present and certain other recently published applications (Balss, 1951, *Bull. zool. Nomencl.* **2** : 344) :—

Mr. L. B. Holthuis hat mir eine Reihe von Anträgen an die internationale Nomenklaturkommission zugesandt (Commission's

references Z.N.(S.) 231 (*Crangon*), 209 (*Ligia*), 473 (*Scyllarides*), 474 (*Lysiosquilla*), 475 (*Odontodactylus*).

Ich erlaube mir, Ihnen mitzuteilen, dass ich mit allen seinen Vorschlägen einverstanden bin.

11. Support received from Professor E. Sollaud (Université de Lyon, Faculté des Sciences, Lyon) : On 11th July 1951 Professor E. Sollaud (*Université de Lyon, Faculté des Sciences, Lyon*) addressed the following letter in support of the present and other recently published applications (Sollaud, 1951, *Bull. zool. Nomencl.* 2 : 344) :—

Je reçois de mon collègue et ami Mr. Holthuis, du Museum de Leide, cinq notes relative à des propositions faites à l'International Commission on Zoological Nomenclature au sujet d'un certain nombre de noms de genres de Crustacés (Commission's references Z.N.(S.) 231 (*Crangon*), 209 (*Ligia*), 473 (*Scyllarides*), 474 (*Lysiosquilla*), 475 (*Odontodactylus*)).

Je vous informe que, après avoir lu attentivement ces notes, j'approuve entièrement les propositions de Mr. Holthuis. J'estime qu'une application rigoureuse, en toutes circonstances, du loi de priorité conduirait à d'inextricables confusions et, bien loin de servir notre science, lui serait tres préjudiciable. Il est impossible d'abandonner de noms tels que *Ligia*, *Crangon*, *Alpheus*, . . ., qui sont passés dans le langage courant, et votre Commission fera oeuvre bien utile en freinant l'ardeur des "puristes" de la Priorité.

12. Support received from Dr. Ricardo Zariquiey (Enfermedades de la Infancia, Barcelona, Spain) : On 25th July 1951 Dr. Ricardo Zariquiey (*Enfermedades de la Infancia, Barcelona, Spain*) wrote the following letter to the Commission supporting this and certain other applications which had then recently been published (Zariquiey, 1951, *Bull. zool. Nomencl.* 6 : 72) :—

Estudiadas detenidamente las propuestas Z.N.(S.) 231 sobre el uso de los nombres genéricos *Crangon* Fabricius, 1798, y *Alpheus* Fabricius, 1798, la Z.N.(S.) 209 sobre el uso del nombre genérico *Carcinus* Leach, 1814, y la Z.N.(S.) 473 sobre el nombre genérico *Scyllarides* Gill, 1898, debo manifestarle que estoy de acuerdo con las conclusiones de las mismas y que Voto "SI" a lo quo propone el Dr. L. B. Holthuis, ponente de las mismas.

13. View submitted by Professor Charles H. Blake (Massachusetts Institute of Technology, Department of Biology, Cambridge, Mass., U.S.A.) : In the following letter dated 8th August 1951 Professor Charles H. Blake (*Massachusetts Institute of Technology, Department of Biology, Cambridge, Mass., U.S.A.*) discussed the case of the name *Ligia* Fabricius, 1798, and compared it with that of *Crangon* Fabricius, 1798,² and *Tylos* Meigen, 1800³ (Blake, 1952, *Bull. zool. Nomencl.* **6** : 182—183) :—

Comments on the applications relating to the names “Crangon” Fabricius, 1798, and “Ligia” Fabricius, 1798 (Class Crustacea, Order Decapoda) submitted by Dr. L. B. Holthuis, and on the application relating to the name “Tylos” Meigen, 1800 (Class Insecta, Order Diptera) submitted by Professor Martin L. Aczél

By CHARLES H. BLAKE

(*Massachusetts Institute of Technology, Department of Biology, Cambridge, Mass., U.S.A.*)

I should like to make comments on three nomenclatorial cases which are pending. They bear the file numbers (Z.N.(S.) 231, 209 and 501). The first two cases bear on the acceptability of the infamous Weber publication.

2. In 1904 the International Commission regarded Weber's work as legally published in spite of the fact that for more than a century it had not been regarded by most authors as legitimately, that is ethically, published. There seems to be no doubt that Weber was, in fact, a sort of zoological pirate. The question as to whether Fabricius deliberately crossed Weber up in 1798 when he himself published his own names is not important. The difficulty seems to arise from the fact that the Commission in 1904 took a strictly legalistic view of the matter, and from that point of view their decision is correct ; but they failed to take into account two things : (1) that the non-use of Weber's names had in fact established an unwritten precedent, and (2) that, based on the maxim *stare decisis*, the Commission would have been better

² The case of *Crangon* Fabricius, 1798, has now been the subject of a decision by the Commission, which has been embodied in *Opinion* 334 (1954, *Ops. Decls. int. Comm. zool. Nomencl.* **10** : 1—44).

³ The case of *Tylos* Meigen, 1800, and *Micropeza* Meigen, 1803 (Class Insecta) and *Tylos* (Latreille MS.) Audouin, [1826] (Class Crustacea), has now been the subject of a decision by the Commission, which will shortly be embodied in an *Opinion*.

advised to have followed that use rather than to overthrow it on technical grounds. Zoological nomenclature as a whole has suffered in part from the fact that unwritten and traditional decisions have been either accepted or ignored in a rather uncertain fashion.

3. In a previous letter I mentioned the maxim *stare decisis* I believe, and I take the liberty here of quoting from Baldwin's 1928 edition of Bouvier's *Law Dictionary*, pages 1127—1128 as to the view taken of the maxim in the United States and I would assume that the English view of it would be essentially similar. The maxim may be defined as follows: "When a point has been settled by decision, it forms a precedent which is not afterwards to be departed from". "A court . . . should consider how far its action would affect transactions entered into and acted upon, under the law as it exists; 11 Tex. 455"; "but where a decision relates to the validity of certain modes of transacting business, and a change of decision must necessarily invalidate everything above in the mode prescribed by the former case . . . the maxim becomes imperative . . . 15 Wisc. 691".

4. It must be admitted at this point that the maxim may strike continental European jurists with considerably less force than it has for the Anglo-Saxon jurist. This does not make it any less sound. Turning now to File Z.N.(S.) 231, I would associate myself with Fenner Chace's opinion as to the use of the generic names *Crago* and *Crangon*. Here I mention a point with regard to the objection raised as to the similarity of family names derived from these two generic names. There is a much worse and unavoidable case which nonetheless has caused no confusion. In the beetles we have an occasionally used family name LARIDAE from the genus *Lara*. In birds we have the same family name based on the genus *Larus* and in wasps the family name LARRIDAE based on the generic name *Larra*. Granted these all occur in different orders rather than within the same order. However, nearly identical sub-family names occur in the crustacean family CYTHEREIDAE without causing confusion. Therefore, I hold that the similarity of family names is no bar to the employment of *Crago* and *Crangon*.

5. With reference to File Z.N.(S.) 209, on the basis of usage I think we should certainly accept *Ligia* of Fabricius, 1798, in spite of the fact that the Weber application of *Ligia* is older. Here we might argue that *Ligia* is a genus not much treated by American authors who tend to accent Weber and hence the weight of opinion rests on the Europeans. However, this would mean contravening the decision of the International Commission, while upholding it in the previous case. If this be done, then we have in effect nullification and while nullification is a time-honoured American method of popular legislation, I think it would be unsafe to introduce it into the legislation with

regard to zoological nomenclature. Hence, as regards these two cases, I would like to see the opinion of 1904 stand in spite of the fact that it may appear to cause some confusion. Here, I think, no further confusion will be caused than already exists.

6. Turning now to File Z.N.(S.) 501, the apparent situation is somewhat similar. It would appear that Meigen himself wished to suppress his names of 1800 in favour of those of 1803. And the Commission might, in *Opinion* 28, have been better advised to follow Meigen rather than the letter of the law. However, the instant case *Tylos* versus *Micropeza* is not as simple as some of the other cases may be. There is a genus *Tylos* in the Isopod Crustacea proposed by V. Audouin in 1825. This genus, which is the type genus of the family and the sole genus of the family, has enjoyed uninterrupted use since that time. There exists only one possible synonym due to L. Koch in 1856. In spite of the testimony of von Ebner in 1868, the title of Koch's name to be considered a synonym of *Tylos* is clouded. It has never been employed as an accepted generic name since 1856. We may set then this uninterrupted use of the generic name *Tylos* against the fact that on Aczél's own showing the name was used in the Diptera only occasionally so recently as 1932 and certainly *Micropeza* is fully as well known. Parenthetically, the family name TYLIDAE in the Crustacea dates back at least to 1885 while in the Diptera it dates only from 1931. Therefore, in this case it would seem as though there would be less ultimate confusion if *Tylos* of Meigen were declared ineligible, not on the basis of reversal of *Opinion* 28, but rather on the basis that it comes into conflict with a name in another group which has enjoyed a century and a quarter of uninterrupted use ; use which dates back to the days when Meigen's own wishes with regard to the names of 1800 were followed.

14. Support received from Dr. Hans Strouhal (Naturhistorisches Museum, Zoologische Abteilung, Vienna, Austria) : On 9th October 1951, Dr. Hans Strouhal (*Naturhistorisches Museum, Zoologische Abteilung, Vienna, Austria*) addressed a letter in which, after referring to the application submitted by Miss Buitendijk and Dr. Holthuis (reproduced in paragraph 1 of the present *Opinion*) he associated himself in full with the action recommended by those specialists, for this purpose quoting the Points numbered (1) to (4) in which, in the last paragraph of their application, those authors had summarised the action which they asked the Commission to take (Strouhal, 1952, *Bull. zool.Nomencl.* 6 : 180).

15. Support received from Dr. Isobel Gordon (British Museum (Natural History), London) : In a letter dated 29th October 1951 Dr. Isobel Gordon (*British Museum (Natural History), London*), writing in regard to this and four other applications by Dr. Holthuis which had then recently been published in the *Bulletin* : " I wish to say that I am willing to add my support to all the proposals submitted to the International Commission on Zoological Nomenclature by Dr. L. B. Holthuis " (Gordon, 1952, *Bull. zool. Nomencl.* **6** : 183).

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

16. Issue of Voting Paper V.P.(52)60 : On 22nd May 1952, a Voting Paper (V.P.(52)60) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal " relating to the name *Ligia* Fabricius, 1798, as set out in Points (1) to (4) on page 101 of volume 2 of the *Bulletin of Zoological Nomenclature* " [*i.e.*, in paragraph 8 of the application reproduced in the first paragraph of the present *Opinion*].

17. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August 1952.

18. Particulars of the Voting on Voting Paper V.P.(52)60 : The state of the voting on Voting Paper V.P.(52)60 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ;
Vokes ; Bradley ; do Amaral ; Hemming ; Esaki ;
Riley ; Lemche ; Mertens ; Pearson ; Stoll ; Boschma ;

(b) *Negative Votes* :

None ;

(c) *Voting Paper not returned by two (2)* :

Cabrera⁴ ; Jaczewski.

19. Declaration of Result of Vote : On 23rd August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)60, signed a Certificate that the Votes cast were as set out in paragraph 18 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

20. Preparation of the Ruling given in the present "Opinion"
On 12th May 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)60.

21. The following are the original references for the names placed on the *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

Carcinides Rathbun, 1897, *Proc. biol. Soc. Wash.* **11** : 164
Carcinus Latreille, 1796, *Précis caract. génér. Ins.* : 197
Carcinus Leach, 1814, in Brewster's *Edinb. Ency.* **7** : 390
Ligia Weber, 1795, *Nomencl. ent.* : 92
Ligia Fabricius, 1798, *Suppl. Ent. syst.* : 296, 301
maenas, *Cancer*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 627
oceanicus, *Oniscus*, Linnaeus, 1767, *Syst. Nat.* (ed. 12) **1(2)** : 1061

⁴ After the close of the Prescribed Voting Period, an affirmative Vote was received (on 1st September, 1952) from Commissioner Cabrera.

22. The following is the reference for the type selection for *Ligia* Fabricius, 1798, specified in the Ruling given in the present *Opinion*:—Latreille, 1810, *Consid. gén. Anim. Crust. Arach. Ins.* : 423, 110.

23. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G)75 has been allotted.

24. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

25. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

26. The present *Opinion* shall be known as *Opinion Three Hundred and Thirty (330)* of the International Commission on Zoological Nomenclature.

DONE in London, this Twelfth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 25. Pp. 339—354

OPINION 331

Designation, under the Plenary Powers, of a lectotype for the nominal species *Asterias quinqueloba* Goldfuss, 1831 (Class Asteroidea) in harmony with accustomed nomenclatorial usage



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 331

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 331

DESIGNATION, UNDER THE PLENARY POWERS, OF A LECTOTYPE FOR THE NOMINAL SPECIES " ASTERIAS QUINQUELOBA " GOLDFUSS, 1831 (CLASS ASTEROIDEA) IN HARMONY WITH ACCUSTOMED NOMENCLATORIAL USAGE

RULING :—(1) Under the Plenary Powers, (a) all selections of lectotypes for the nominal species *Asterias quinqueloba* Goldfuss, 1831 (Class Asteroidea) made prior to the present Ruling are hereby set aside, and (b) the specimen illustrated as sub-figure " u ", one of the component ossicles of which is represented, enlarged in subfigure " t ", of figure 5 on plate 63 in volume 1 of Goldfuss (G.A.), 1831, *Petrefacta Germaniae* is hereby designated to be the lectotype of the foregoing species.

(2) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* as Name Nos. 799 to 801 respectively :—(a) *Crateraster* Spencer, 1913 (gender : masculine) (type species, by original designation : *Asterias quinqueloba* Goldfuss, 1831, the species so named to be defined by the lectotype designated, under the Plenary Powers, under (1)(b) above) ; (b) *Metopaster* Sladen, 1893 (gender : masculine) (type species, by selection by Rasmussen (1950) : *Goniaster* (*Goniodiscus*) *parkinsoni* Forbes, 1848) ; (c) *Valettaster* Lambert, 1914 (gender : masculine) (type species, by selection by Rasmussen (1950) : *Oreaster ocellatus* Forbes, 1848).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 238 to 240 respectively :—(a) *ocellatus* Forbes, 1848, as published in the combination *Oreaster ocellatus* (specific name of type species of *Valettaster* Lambert, 1914) ; (b) *parkinsoni* Forbes, 1848, as published

in the combination *Goniaster (Goniodiscus) parkinsoni* (specific name of type species of *Metopaster* Sladen, 1893); (c) *quineloba* Goldfuss, 1831, as published in the combination *Asterias quineloba*, as defined by the lectotype designated, under the Plenary Powers, under (1)(b) above (specific name of type species of *Crateraster* Spencer, 1913).

(4) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name Nos. 210 and 211 respectively:—(a) *Tholaster* Spencer, 1913 (a junior homonym of *Tholaster* Seunes, 1891); (b) *Tholasterina* Valette, 1915 (a junior objective synonym of *Valettaster* Lambert, 1914).

I.—THE STATEMENT OF THE CASE

On 31st January 1951, Mr. C. W. Wright (*London*) submitted an application for the designation, under the Plenary Powers, of a lectotype for the nominal species *Asterias quineloba* Goldfuss, 1831 (Class Asteroidea), in harmony with accustomed nomenclatorial usage. A slight revision of the form of this application was required in order to bring the request submitted in this case into line with the instructions given to the Commission by the Thirteenth International Congress of Zoology, Paris, 1948, regarding the placing on the *Official Lists* and *Official Indexes* of names involved in applications submitted to it for decision. The application, so revised, was as follows:—

Proposed use of the Plenary Powers to designate a lectotype for the nominal species “*Asterias quineloba*” Goldfuss, 1831 (Class Asteroidea) in harmony with currently accepted nomenclatorial practice

By C. W. WRIGHT (*London*)

1. The object of the present application is to invite the International Commission on Zoological Nomenclature to use its Plenary Powers

to designate a lectotype for the nominal species *Asterias quinqueloba* Goldfuss, 1831 (Class Asteroidea) in order to avoid the serious confusion and disturbance in current nomenclatorial practice which would inevitably follow any attempt strictly to apply the normal provisions of the *Règles* in this case. It is hoped that it will be possible for the International Commission to give an early decision on the present application, since that decision is urgently required in connection with the preparation of the relevant portion of the forthcoming *Treatise on Invertebrate Paleontology*. The details relating to this case are set out in the following paragraphs.

2. The generic name *Metopaster* was published by Sladen in 1893 (*in* Sladen & Spencer *in* Wright, 1893, *Brit. foss. Echinod. cret. Formations* 2 (2) : 30). Sladen did not designate or indicate a type species for the genus so named, to which he assigned eight nominal species. In practice, the first of these species, *Goniaster (Goniodiscus) parkinsoni* Forbes, 1848 (*Mem. geol. Survey Great Britain* 2 : 472) has been generally regarded by subsequent workers as typifying this genus, but neither it nor any other species was selected under Rule (g) in Article 30, until in 1950 Rasmussen (*Dansk. geol. Unders.* 2 (No. 77) : 16) selected this species to be the type species.

3. Spencer in 1913 (*Phil. Trans. Roy. Soc. (B)* 204 : 120) published the generic name *Crateraster*. He assigned two nominal species to the genus so named and one of these, *Asterias quinqueloba* Goldfuss, 1831, he designated as the type species.

4. At the time when the name *Asterias quinqueloba* was first published, Goldfuss (1831, *Petref. German.* 1 : 209 pl. 63) gave under his figure 5 reproductions of a considerable number of individual marginalia. Goldfuss' figures were examined in detail in 1907 by Spencer who came to the conclusion that three species were involved, namely : (1) *Goniaster (Goniodiscus) parkinsoni* Forbes, 1848, to which he assigned sub-figures "a" to "p" of Goldfuss' figure 5 ; (2) *Oreaster ocellatus* Forbes, 1848, *Mem. geol. Survey Great Britain* 2 : 468, to which he assigned Goldfuss' sub-figures "q" to "r" ; (3) *Pentagonaster megaloplax* Sladen, 1891, to which he assigned Goldfuss' sub-figures "s" to "u". These three species were by this time regarded as belonging to three different genera, the first to *Metopaster* Sladen, 1893, the second to *Stauranderaster* Spencer, 1907 (*in* Sladen & Spencer *in* Wright, *Brit. foss. Echinod. Cret. Formations* 2 (4) : 99, 125) (of which *Oreaster boysi* Forbes, 1848, *Mem. geol. Survey Great Britain* 2 : 468, is the type species, by original designation), the third to *Pentagonaster* Schulze, 1760 (*Verst. Seest.* : 51). At the conclusion of his review Sladen selected Goldfuss' sub-figures "t" and "u" to represent the lectotype of *Asterias quinqueloba* Goldfuss, 1831. The effect of this action was to reduce the trivial name

megaloplax Sladen to the status of a junior subjective synonym of the trivial name *quinqueloba* Goldfuss, 1831.

5. Unfortunately, in making the foregoing lectotype selection for *Asterias quinqueloba* Goldfuss, Spencer overlooked the fact that on page 209 of his work Goldfuss had added, with reference to sub-figures "s", "t" and "u" included in his figure 5, the words "Assulae marginalia specierum affinium", thus indicating that the marginalia so figured were referable not to his *Asterias quinqueloba* but to allied but distinct species. Accordingly, under Rule (e) of Article 30, as applied to specific trivial names by Article 31, the above sub-figures are ineligible for selection to represent the lectotype of *Asterias quinqueloba* Goldfuss, the marginalia so figured not having been referred to this nominal species by Goldfuss when he first published the specific name *Asterias quinqueloba*. Thus, Spencer's selection of these marginalia to represent the lectotype of this species is invalid under the *Règles*.

6. Spencer's lectotype selection has been followed by subsequent workers, no one subsequently having made any other such selection. Now that that selection is seen to be invalid, it is necessary to consider what would be the effect of making either of the two selections which alone are possible under Article 31—a provision which, it may usefully be recalled, was greatly clarified by the International Congress of Zoology in 1948 (see 1950, *Bull. zool. Nomencl.* 4 : 73—76). The possible choices are either (1) one of the marginalia figured by Goldfuss as sub-figures "a" to "p", or (2) the marginalia figured by that author as sub-figures "q" and "r". If the first course were to be adopted, the species represented by the nominal species *Asterias quinqueloba* Goldfuss would become subjectively identical with that represented by the nominal species *Goniaster (Goniodiscus) parkinsoni* Forbes, 1848, while if the second course were to be adopted, Goldfuss' species would become subjectively the same as *Oreaster ocellatus* Forbes, 1848 (now known as *Valettaster ocellatus* (Forbes, 1848)). Thus, at the species level the adoption of the first of these courses would be to make the trivial name *parkinsoni* Forbes, 1848, a junior subjective synonym of the trivial name *quinqueloba* Goldfuss, 1831, while the adoption of the second of these courses would be to make the trivial name *ocellatus* Forbes, 1848, a junior subjective synonym of Goldfuss' *quinqueloba*. In either case, the species which for the last forty-four years has been known as *Crateraster quinqueloba* (Goldfuss, 1831) would be deprived of its accustomed trivial name and would have to bear the trivial name *megaloplax* Sladen, 1891, a name which (as already explained) has been treated as a synonym ever since the publication of Spencer's paper of 1907.

7. The effects of either of the foregoing lectotype selections for *Asterias quinqueloba* Goldfuss would be equally disastrous at the genus level :—

- (1) If the first of the foregoing courses were to be adopted and, in consequence, it were necessary subjectively to identify *Asterias quinqueloba* Goldfuss, 1831 (the type species of *Crateraster* Spencer, 1913) with *Goniaster (Goniodiscus) parkinsoni* Forbes, 1848 (the type species of *Metopaster* Sladen, 1893), the generic name *Crateraster* Spencer would become a subjective junior synonym of *Metopaster* Sladen.
- (2) If the second of the foregoing courses were to be adopted and, in consequence, it were necessary subjectively to identify *Asterias quinqueloba* Goldfuss, 1831 (the type species of *Crateraster* Spencer, 1913) with *Oreaster ocellatus* Forbes, 1848, the name *Crateraster* Spencer, 1913, would become a subjective senior synonym of, and would replace, the name *Valettaster* Lambert, 1914 (*Rév. crit. Paléozool.* 1914 : 27) of which *Oreaster ocellatus* Forbes, 1848, is the type species. (The name *Valettaster* Lambert was published as a nom. nov. pro *Tholaster* Spencer, 1913 (*Phil. Trans. roy. Soc. (B)* 204 : 137), which is invalid, because it is a junior homonym of the name *Tholaster* Seunes, 1891, *Bull. Soc. géol. France* (3) 19 : 23. The name *Tholasterina* Valette, 1915 (*Bull. Soc. Sci. hist. nat. Yonne* 68 (2) : 57), also proposed as a nom. nov. pro *Tholaster* Spencer, 1913, is invalid, being a junior objective synonym of *Valettaster* Lambert, 1914.)

8. It will be seen from the foregoing particulars that whatever lectotype were to be selected for *Asterias quinqueloba* Goldfuss, great confusion would necessarily ensue, for (1) in either case it would be necessary to transfer the trivial name *quinqueloba* Goldfuss from the species which has borne that name for the last forty-four years and to apply it to a species belonging to a different genus, and (2) it would be necessary either to transfer the name *Metopaster* Sladen from the genus for which it has always been used to the genus known ever since 1913 as *Crateraster* Spencer, or to transfer the name *Crateraster* Spencer from the genus for which it has always been used to the genus known since 1914 as *Valettaster* Lambert. Either of these results would be open to very strong objection, all the more so because the species concerned are among the commonest species of the Cretaceous of North-Western Europe and have frequently been recorded in the literature of the Chalk.

9. For the foregoing reasons the present seems to be a pre-eminently suitable case for the use by the International Commission on Zoological Nomenclature of its Plenary Powers for the purpose of preventing

confusing changes in nomenclature, having regard especially to the fact that the avoidance of transfers of names (either generic names or trivial names) from one taxonomic unit to another is specifically cited among the purposes for which the International Congress of Zoology conferred the Plenary Powers upon the International Commission (see *Declaration 5*, published in 1943, *Opinions and Declarations rendered by the International Commission on Zoological Nomenclature* 1 : 31—40).

10. I accordingly request the International Commission on Zoological Nomenclature :—

- (1) to use its Plenary Powers (a) to set aside all selections of lectotypes for the nominal species *Asterias quinqueloba* Goldfuss, 1831, made prior to the decision now proposed to be taken, and (b) to designate sub-figures “ t ” and “ u ” of figure 5 on plate 63 in volume 1 of Goldfuss (G.A.), *Petrefacta Germaniae* to represent the lectotype of the foregoing nominal species ;
- (2) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—
 - (a) *Crateraster* Spencer, 1913 (type species, by original designation : *Asterias quinqueloba* Goldfuss, 1831, as proposed, under (1)(b) above, to be defined under the Plenary Powers) (gender of generic name : masculine) ;
 - (b) *Metopaster* Sladen, 1893 (type species, by selection by Rasmussen, 1950 : *Goniaster (Goniodiscus) parkinsoni* Forbes, 1848) (gender of generic name : masculine) ;
 - (c) *Stauranderaster* Spencer, 1907 (type species, by original designation : *Oreaster boysi* Forbes, 1848) (gender of generic name : masculine) ;
 - (d) *Valettaster* Lambert, 1914 (type species, by selection, by Rasmussen, 1950 : *Oreaster ocellatus* Forbes, 1848) (gender of generic name : masculine) ;
- (3) to place the under-mentioned generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—
 - (a) *Tholaster* Spencer, 1913 (a junior homonym of *Tholaster* Seunes, 1891) ;
 - (b) *Tholasterina* Valette, 1915 (a junior objective synonym of *Valettaster* Lambert, 1914) ;

(4) to place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology* :—

- (a) *boysi* Forbes, 1848, as published in the binominal combination *Oreaster boysii* (trivial name of type species of *Stauranderaster* Spencer, 1907) ;
- (b) *ocellatus* Forbes, 1848, as published in the binominal combination *Oreaster ocellatus* (trivial name of type species of *Valettaster* Lambert, 1914) ;
- (c) *parkinsoni* Forbes, 1848, as published in the combination *Goniaster (Goniodiscus) parkinsoni* (trivial name of type species of *Metopaster* Sladen, 1893) ;
- (d) *quinqueloba* Goldfuss, 1831, as published in the binominal combination *Asterias quinqueloba*, as proposed, under (1)(b) above, to be defined under the Plenary Powers (trivial name of type species of *Crateraster* Spencer, 1913).

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Mr. Wright's application, the question of the identity of the taxonomic species to be accepted as being represented by the nominal species *Asterias quinqueloba* Goldfuss, 1831, was allotted the Registered Number Z.N.(S.) 514.

3. Publication of the present application : The present application was sent to the printer in March 1951 and was published on 28th September 1951 in Part 4 of volume 6 of the *Bulletin of Zoological Nomenclature* (Wright, 1951, *Bull. zool. Nomencl.* 6 : 106—110).

4. Issue of Public Notices : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 50—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was

issued on 28th September 1951, both in Part 4 of volume 6 of the *Bulletin of Zoological Nomenclature* (the Part in which Mr. Wright's application had been published) and also to the other prescribed serial publications. The publication of these Notices elicited no objection to the action proposed.

5. Withdrawal of the proposal in relation to the name "Stauranderaster" Spencer, 1907 : On 12th October 1951, Mr. Wright notified the Commission that, since the submission of his application, he had discovered that the generic name *Stauranderaster* Spencer, 1907, was to be regarded as a junior subjective synonym of *Aspidaster* de Loriol, 1884. Mr. Wright accordingly asked leave to withdraw the proposal which he had submitted in regard to the former of these names.

6. Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America : In the following letter dated 18th February 1952 (received on 9th April 1952) Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America, reported that by ten votes to one the members of the Joint Committee had decided to support the present application :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you that, being polled, they voted : To support the petition (ten) :—(1) R. C. Moore ; (2) J. Marvin Weller ; (3) A. Myra Keen ; (4) Katherine V. W. Palmer ; (5) Don L. Frizzell ; (6) Bryan Patterson ; (7) G. Winston Sinclair ; (8) Bobb Schaeffer ; (9) Siemon W. Muller ; (10) John B. Reeside, Jr. To oppose the petition (one) :—John W. Wells.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

7. Issue of Voting Paper V.P.(52)55 : On 22nd May 1952 a Voting Paper (V.P.(52)55) was issued to the Commission in

regard to the present application. In a note annexed to this Voting Paper the Secretary, after giving the customary particulars regarding compliance with the regulations relating to the issue of Public Notices (paragraph 4 above) and comments received on this application (paragraph 6 above) reported the withdrawal by Mr. Wright of his proposals relating to the name *Stauranderaster* Spencer, 1907 (paragraph 5 above). Mr. Hemming noted that effect could be given to the main portion of Mr. Wright's proposal, if such were to be the desire of the Commission, by excepting from the proposal submitted the individual proposals numbered as Points (2)(c) and (4)(a) in the summary furnished by Mr. Wright at the end of his application. Accordingly, in the Voting Paper referred to above, the Members of the Commission were invited to vote either for, or against, the proposal "relating to the name *Asterias quinqueloba* Goldfuss, 1831, as set out in Points (1), (2) (a), (b) and (d), (3) and (4)(b) to (d) in paragraph 10 at the foot of page 109 and continued on page 110 of volume 6 of the *Bulletin of Zoological Nomenclature*" [*i.e.*, the whole of the proposals submitted by Mr. Wright in paragraph 10 of the application reproduced in the first paragraph of the present *Opinion*, except the proposals numbered in that paragraph as proposals (2)(c) and (4)(a)].

8. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August, 1952.

9. Particulars of the Voting on Voting Paper V.P.(52)55 : The state of the voting on Voting Paper V.P.(52)55 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received) :*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ;
Vokes ; Bradley ; do Amaral ; Hemming ; Esaki ;
Riley ; Lemche ; Pearson ; Stoll ; Boschma ;

(b) *Negative Votes* :

None ;

(c) *Voting Paper not returned by three (3)* :Cabrera¹ ; Jaczewski ; Mertens.

10. Declaration of Result of Vote : On 23rd August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)55, signed a Certificate that the Votes cast were as set out in paragraph 9 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

11. Definition of the lectotype for the nominal species "Asterias quinqueloba" designated by the Ruling given in the present "Opinion" : After the close of the Fourteenth International Congress of Zoology, Copenhagen, 1953, Mr. Hemming, as Secretary to the Commission, decided that, before the preparation of a Ruling on any subject on which a vote had been taken prior to the meeting of the foregoing Congress, the wording employed in the proposal so voted upon ought to be examined in the light of the amendments of the *Règles* made by the Copenhagen Congress, in order to make sure that that decision was in harmony with those amendments. Those amendments were not, as yet, formally in operation, but the Congress, while protecting decisions already reached by the Commission, had asked the Commission to guide itself generally in the light of those amendments during the interim period between the close of the Copenhagen Congress and the formal entry into force of the Revised text of the *Règles* adopted by it. When, under the procedure explained above, Mr. Hemming examined the decision taken in the present case, he took the view that the wording of that decision required review

¹ After the close of the Prescribed Voting Period, an affirmative vote was received (on 1st September 1952) from Commissioner Cabrera.

from two points of view : (1) In order to harmonise that decision with the amendments to the *Règles* made by the Copenhagen Congress in regard to type specimens, it was necessary to confine the lectotype selection for the nominal species *Asterias quinqueloba* Goldfuss to a single figure instead of basing it (as till then proposed) upon two figures, unless there was clear evidence that the two figures in question represented the same specimen. (2) It would be more consistent with the spirit of the Copenhagen decisions to designate as the lectotype the specimen illustrated by whichever of Goldfuss' figures was chosen for that purpose rather than to designate that figure "to represent the lectotype". Accordingly, on 11th May 1954, Mr. Hemming wrote a letter to Mr. Wright, as the applicant in this case, asking for his views on the foregoing points. In his reply dated 14th May 1954 Mr. Wright agreed that the change in wording indicated in (2) above was an improvement, and, as regards point (1) above, explained that of the two sub-figures (sub-figs. "t" and "u") cited in the application, the first (*i.e.*, sub-fig. "t") represented an enlarged view of one of the ossicles illustrated in the second sub-figure (sub fig. "u") and therefore that both the sub-figures concerned represented portions of the same specimen. In the light of Mr. Wright's reply, it was evident that all that was required on this subject was the insertion in the Ruling of words making it clear that the two sub-figures published by Goldfuss represented the same specimen.

12. Preparation of the Ruling given in the present "Opinion" :

On 15th May 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)55, subject to the two drafting amendments specified in paragraph 11 above.

13. The following are the original references for the names placed on the *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

- Crateraster* Spencer, 1913, *Phil. Trans. Roy. Soc. (B)* **204** : 120
Metopaster Sladen, 1893, in Sladen & Spencer in Wright, *Brit. foss. Echinoderm. cret. Formations* **2** (2) : 30

- ocellatus*, *Oreaster* Forbes, 1848, *Mem. geol. Surv. Great Brit.* **2** : 468
parkinsoni, *Goniaster* (*Goniodiscus*), Forbes, 1848, *Mem. geol. Surv. Great Brit.* **2** : 472
quinqueloba, *Asterias*, Goldfuss, 1831, *Petref. German.* **1** : 209, pl. 63, fig. 5, sub-figs "u" "t"
Tholaster Spencer, 1913, *Phil. Trans. Roy. Soc. (B)* **204** : 137
Tholasterina Valette, 1915, *Bull. Soc. Sci. hist. nat. Yonne* **68** (2) : 57
Valettaster Lambert, 1914, *Rev. crit. Paleozool.* **1914** : 27

14. The following are the references for the selection of type species of the under-mentioned genera referred to in the Ruling given in the present *Opinion* :—

- For *Metopaster* Sladen, 1893 : Rasmussen, 1950, *Dansk. geol. Unders.* **2** (No. 77) : 16
 For *Valettaster* Lambert, 1914 : Rasmussen, 1950, *Dansk. geol. Unders.* **2** (No. 77) : 93

15. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

16. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the

expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

17. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

18. The present *Opinion* shall be known as *Opinion Three Hundred and Thirty-One* (331) of the International Commission on Zoological Nomenclature.

DONE in London, this Fifteenth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by
FRANCIS HEMMING, C.M.G., C.B.E.,
Secretary to the Commission

VOLUME 9. Part 26. Pp. 355—368

OPINION 332

Rejection for nomenclatorial purposes of the work by
William Borlase entitled *The Natural History of Cornwall*
published in 1758



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 332

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History),
Zoological Museum, Tring, Herts., England.*)

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil.*)

Secretary : Mr. Francis Hemming (*London, England.*)

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

OPINION 332

REJECTION FOR NOMENCLATORIAL PURPOSES OF THE WORK BY WILLIAM BORLASE ENTITLED “THE NATURAL HISTORY OF CORNWALL” PUBLISHED IN 1758

RULING :—(1) It is hereby ruled that in the work entitled *The Natural History of Cornwall* published in 1758 William Borlase did not apply the principles of binominal nomenclature and therefore that new names published in the foregoing work do not satisfy the requirements of Proviso (a) to Article 25 of the *Règles* and accordingly possess no rights under the Law of Priority in virtue of having been so published.

(2) The under-mentioned works are hereby placed on the *Official Index of Rejected and Invalid Works in Zoological Nomenclature* as Works Nos. 26 and 27 respectively :—(a) Borlase (W.), 1758, *The Natural History of Cornwall*, as rejected in (1) above ; (b) Gronovius (L.T.), 1762, paper entitled “*Animalium belgicorum observatorum Centuria Quinta*” published in volume 5 of the serial publication *Acta Helvetica physico-mathematico-botanico-medica* (a paper in which the author did not apply the principles of binominal nomenclature).

(3) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name Nos. 224 to 226 respectively :—(a) *Astacus* Borlase, 1758 (a name published in a work rejected for nomenclatorial purposes under (1) above) ; (b) *Astacus* Gronovius, 1762 (a name published in a work rejected for nomenclatorial purposes) ; (c) *Astacus* Gronovius, 1764 (a name published in a work rejected for nomenclatorial purposes).

I.—THE STATEMENT OF THE CASE

On 27th May 1951, Mr. Francis Hemming, *Secretary to the International Commission on Zoological Nomenclature*, submitted the following application for a Ruling that in the work entitled *The Natural History of Cornwall* published in 1758, William Borlase did not apply the principles of binominal nomenclature and therefore that new names did not acquire the status of availability by reason of having been so published :—

On the status for the purposes of zoological nomenclature of the work entitled "The Natural History of Cornwall" by William Borlase published in 1758, with special reference to the availability of the generic name "Astacus" Borlase, 1758 (Class Crustacea, Order Decapoda)

By FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

1. When during the late war (in 1944) I was engaged in checking the entries made in the *Official List of Generic Names in Zoology* with a view to its eventual publication in book form (in accordance with the decision announced in 1943 (*Bull. zool. Nomencl.* 1 : xxii—xxiv)), I found, when I came to examine the entries in the *Official List* made in the Commission's *Opinion* 104 (1928, *Smithson. misc. Coll.* 73 (No. 5) : 27) that there was a doubt as to the availability under the *Règles*, of the generic name *Astacus* Pallas, 1772 (*Spicil. zool.* 9 : 81) placed on the *Official List* under that *Opinion*.

2. The doubt in regard to the availability of the name *Astacus* as from Pallas, 1772 arose from the fact that on three occasions prior to the publication of volume 9 of the *Spicilegia zoologica* of Pallas,¹ the name *Astacus* had been used—or was alleged to have been used—as a generic name by other authors. These three earlier uses of the name *Astacus* were the following :—

(1) *Astacus* Borlase, 1758, *Nat. Hist. Cornwall* : 274.

¹ The Commission has since suppressed the generic name *Astacus* Pallas, 1772, under its Plenary Powers for the purpose of validating the name *Astacus* Fabricius, 1775, which has now been placed on the *Official List of Generic Names in Zoology* in place of *Astacus* Pallas, 1772. See *Opinion* 349 (in the press).

- (2) *Astacus Gronovius*, 1762, *Acta Helv.* 5 : 365 (not vol. 4, published in 1760, as frequently stated) ;
- (3) *Astacus Gronovius*, 1764, *Zoophylac. gronov.* : 227.

3. Of the foregoing works, the *Zoophylacium gronovianum* of 1764, was a non-binominal work which in *Opinion* 20 (1910, *Smithson. Publ.* 1938 : 48—50) the International Commission had ruled as a “ binary ” work. The (in 1944) still unsettled controversy as to the validity of the ruling in regard to the status of generic names published by authors, who, though non-binominal, were allegedly “ binary ” would thus have complicated the issue of the availability of the name *Astacus Pallas*, 1772, through the competition of the earlier name *Astacus Gronovius*, 1764, if it had not been for the fact that, without prejudice to the validity of its decision in *Opinion* 20, the Commission in *Opinion* 89 (1925, *Smithson. misc. Coll.* 73 (No. 3) : 27—33) had used its Plenary Powers to suppress the *Zoophylacium gronovianum* for nomenclatorial purposes. Thus, already by 1944, the name *Astacus Gronovius*, 1764, was seen to be invalid.

4. The unsettled question of “ binary ” versus “ binominal ” nomenclature did however arise in connection with the name *Astacus* as published by Gronovius in 1762 (see paragraph 2 (2) above), for Gronovius was never a binominalist and the sole claim that could be advanced in favour of the name *Astacus Gronovius*, 1762, being accepted as an available name is that it was published by a “ binary ”, though not binominal, author. Dr. Karl Jordan, then President of the International Commission, kindly examined this article by Gronovius and reported (*in litt.* 20th January 1944) : “ The nomenclature of this publication of Gronow’s on the animals of Belgium is of the pre-Linnaean type : generic names generally as the first word of a description ; no trivial names, except occasionally in the literature cited, but names given in the Flemish vernacular. Six species of *Astacus* are described, Nos. 450 to 455. The paper is written in Latin.” In 1944, therefore, it was only possible to note that the question of the availability of the name *Astacus Pallas*, 1772, in relation to the name *Astacus Gronovius*, 1762, was one which must await decision, until at the next (Thirteenth) International Congress of Zoology a final ruling was given on the question of the meaning of the expression “ nomenclature binaire ” under the procedure laid down by the Twelfth International Congress of Zoology, Lisbon, 1935 (see 1943, *Bull. zool. Nomencl.* 1 : 45, 55). In Paris in 1948 the Thirteenth International Congress of Zoology accepted the conclusion unanimously reached by the International Commission that the expression “ nomenclature binaire ” possessed, and, as used in the *Règles*, always had possessed, a meaning identical with that of the expression “ nomenclature binominale ” and decided to substitute the latter expression for the expression “ nomenclature binaire ”, wherever that expression had till then appeared in the *Règles* (see 1950, *Bull. zool. Nomencl.* 4 : 63—66). The effect of this

decision is to show that the name *Astacus Gronovius*, 1762, possesses no rights under the Law of Priority.

5. In the light of the foregoing decision, the only possible competitor of the name *Astacus Pallas*, 1772, is the name *Astacus Borlase*, 1758. During the war it was not possible for me to examine a copy of Borlase's *Natural History of Cornwall*, and, from this point of view also, the status of the name *Astacus Pallas*, 1772, had then to be left in doubt. I have now had an opportunity of examining the copy of Borlase's book in the library of the Zoological Society of London, and have prepared the following Report :—

The Natural History of Cornwall by William Borlase, [1695—1772], was published at Oxford in 1758. Neither the title page nor the preface contains any information throwing light upon the exact date of publication in that year. The book is a small folio (pp. xix, 326, 28 pls., 1 map).

2. Although the title implies that the subject matter of this book is the natural history of the county of Cornwall, a considerable part of it is concerned either with matters of antiquarian interest or with descriptions of the mineral wealth of the county. The remainder consists of a discursive account of the animals and plants recorded as having been observed in the county or on its shores or in its neighbouring waters. The arrangement of the book is in no sense systematic. The species mentioned are referred to usually under their vernacular English names ; after these there are usually added the Latin names used for those species by some established author. The type of nomenclature employed in this book may be judged by the following quotations taken from page 264, relating respectively to the porpoise and the dolphin :—

- (1) “ The porpesse [sic] *Porcus marinus* seu *Phocaena* vel *Tursio* ; *Delphinus corpore fere coniformi, dorso lato, rostro subacuto* Artedi.”
- (2) “ The Dolphin, the *Delphinus* of the ancients and moderns (Ray, p. 12). *Delphinus corpore oblongo subtereti, rostro longo, acuto* of Artedi, p. 105 ”.

3. The foregoing examples show at once that no attempt was made in this book to apply the principles of binominal nomenclature instituted by Linnaeus in 1758. There is, indeed, so far as I can see, no reference at all to Linnaeus throughout the book. Certainly, there is no reference to the system of binominal nomenclature inaugurated in the 10th edition of the *Systema Naturae*. The total absence of any reference to that work makes it virtually certain either that Borlase's *Natural History* was published before the 10th edition of Linnaeus'

great work or that, if the latter was the first to have been published, its existence was unknown to Borlase, who, it may incidentally be noted, complained in his preface of the isolation of Cornwall at that time from the general world of learning.

4. It is perfectly clear from the evidence summarised above that in his *Natural History of Cornwall* Borlase did not apply the principles of binominal nomenclature, of the existence of which, as enunciated by Linnaeus in the 10th edition of the *Systema Naturae* published in the same year, he was indeed probably unaware.

5. As regards the name *Astacus*, the alleged use of which by Borlase led to the present inquiry, it may be noted that this occurs only once—on page 274—where it was used parenthetically in the expression “the lobster, or *Astacus verus*”. No description was given either of the genus or the species. Accordingly, since it has been ruled in *Opinion 1* (1910, *Smithson. Publ.* 1938 : 5) in a provision that it was decided by the Thirteenth International Congress of Zoology (1950, *Bull. zool. Nomencl.* 4 : 148—149) to incorporate in the *Règles*, that the citation of a vernacular name (such as “the lobster”) does not constitute an “indication” for the purposes of Proviso (a) to Article 25, both the generic name *Astacus* and the specific name *Astacus verus*, as published by Borlase in 1758, would have been *nomina nuda*, even if (contrary to what we have seen to be the case) new names in Borlase’s *Natural History of Cornwall* had satisfied the requirements of Proviso (b) to Article 25.

6. Old books of doubtful nomenclatorial standing, such as Borlase’s *Natural History of Cornwall*, constitute a perpetual menace to stability in nomenclature and it is extremely desirable that the status of such books should be clarified as rapidly as possible. In the present case, it is essential that there should be such a clarification, in order that the doubts in regard to the availability of the name *Astacus* Pallas, placed on the *Official List* in *Opinion 104* should be dispelled with as little further delay as possible. In the light of the foregoing Report it is recommended that the International Commission should now issue a ruling that Borlase’s book is not an available book for nomenclatorial purposes. In order further to clarify the position as regards the availability of the generic name *Astacus* Pallas, 1772, it is suggested that the older, but invalid, uses of this generic name should be disposed of by their being placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*. The specific recommendations now submitted to the International Commission on Zoological Nomenclature are therefore that it should :—

- (1) rule that in the work entitled *The Natural History of Cornwall*, published in 1758, William Borlase did not apply the principles

of binominal nomenclature and therefore that new names published in that work do not satisfy the requirements of Proviso (b) to Article 25 of the *Règles*, and accordingly possess no rights under the Law of Priority in virtue of having been so published ;

- (2) place the under-mentioned generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—
- (a) *Astacus* Borlase, 1758 (a name published in a book in which the author did not apply the principles of binominal nomenclature) ;
 - (b) *Astacus* Gronovius, 1762 (a name published in a paper in which the author did not apply the principles of binominal nomenclature) ;
 - (c) *Astacus* Gronovius, 1764 (a name published in a book in which the author did not apply the principles of binominal nomenclature).

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Mr. Hemming's application, the question of the availability of Borlase's *Natural History of Cornwall* was allotted the Registered Number Z.N.(S.) 543.

3. Support by Dr. L. B. Holthuis (Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) : At the same time that he submitted the present application to the Commission Mr. Hemming communicated a copy of it to Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) who on 15th June 1951 submitted to the Commission the following document in support of the action proposed :—

W. Borlase's (1758) "The Natural History of Cornwall" has been considered by various carcinologists (among whom K. H. Barnard,

1950, in his important and recent monograph of the South African Decapoda *Ann. S. Afr. Mus.* **38** : 525, 526) to constitute the first publication in which the generic name *Astacus* has been validly employed. These carcinologists therefore are of the opinion that *Astacus verus* Borlase, 1758 (= *Cancer gammarus* Linnaeus, 1758) should be the type species by monotypy of the genus *Astacus*. This, of course, is contrary to *Opinion* 104 of the International Commission on Zoological Nomenclature, in which *Cancer astacus* Linnaeus is specified as the type species of the genus *Astacus*. The fact that Borlase's book is rare and therefore not accessible to most carcinologists, made it extremely hard for most workers in this group to form a correct opinion on this case. It is very fortunate therefore that, through Mr. Hemming's careful examination of Borlase's work and his conclusion that it contains no valid names, the question at last has been settled. Since the majority of carcinologists did not accept Borlase's name *Astacus*, the stability of carcinological nomenclature will be furthered by the suppression of the book in question.

4. Publication of the present application : The present application was sent to the printer in May 1951 and was published on 28th September of that year in Part 4 of volume 6 of the *Bulletin of Zoological Nomenclature* and Dr. Holthuis's statement in support of this application was received in time to be included in the same Part (Hemming, 1951, *Bull. zool. Nomencl.* **6** : 115—118 ; Holthuis, 1951, *ibid.* **6** : 119).

5. Support received from Dr. Ernst Mayr (then of the American Museum of Natural History, New York) : In a letter dated 31st October 1951, Dr. Ernst Mayr (then of the *American Museum of Natural History, New York*) supported the rejection of Borlase's book and suggested the establishment of an *Official Index* in which should be recorded works such as the present, when rejected for nomenclatorial purposes. This suggestion was noted for submission to the Fourteenth International Congress of Zoology, Copenhagen, 1953. The decision taken by the Congress on this subject is set out in paragraph 10 of the present *Opinion*.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

6. Issue of Voting Paper V.P.(52)57 : On 22nd May 1952, a Voting Paper (V.P.(52)57) was issued in which the Members

of the Commission were invited to vote either for, or against, the proposal "relating to the status of names in Borlase, 1758, *Natural History of Cornwall* and associated questions, as set out in Points (1) and (2) in paragraph 8 on page 118 of volume 6 of the *Bulletin of Zoological Nomenclature*" [i.e. in paragraph 6 of the application reproduced in the first paragraph of the present *Opinion*].

7. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August 1952.

8. Particulars of the Voting on Voting Paper V.P.(52)57 : The state of the voting on Voting Paper V.P.(52)57 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received) :—*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ; Vokes ;
Bradley ; do Amaral ; Hemming ; Esaki ; Riley ;
Lemche ; Mertens ; Pearson ; Stoll ; Boschma ;

(b) *Negative Votes :*

None ;

(c) *Voting Paper not returned by two (2) :*

Cabrera² ; Jaczewski.

² After the close of the Prescribed Voting Period, an affirmative Vote was received (on 1st September 1952) from Commissioner Cabrera.

9. Declaration of Result of Vote : On 23rd August 1953, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)57, signed a Certificate that the Votes cast were as set out in paragraph 8 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

10. Supplementary note on the paper in which the name "Astacus" Gronovius, 1762, was published : At the time of the preparation of the present *Opinion*, Mr. Hemming, as Secretary (on 15th May 1954), placed the following Minute relating to the work in which the name *Astacus* Gronovius, 1762, was published on the Commission's File Z.N.(S.) 543, the File allotted to the present application :—

Borlase, 1758, "The Natural History of Cornwall" : two points arising in connection with the Decision taken by the Commission

MINUTE by FRANCIS HEMMING, C.M.G., C.B.E.,
Secretary to the International Commission on Zoological Nomenclature

The application to the Commission for the rejection for nomenclatorial purposes of William Borlase's work *The Natural History of Cornwall* was submitted some time before the meeting of the Fourteenth International Congress of Zoology, Copenhagen, 1953. In consequence it contained no proposal for placing the title of the above work on the *Official Index of Rejected and Invalid Works in Zoological Nomenclature*, which was first established by that Congress. As in other similar cases, this omission will need to be rectified in the *Opinion* to be rendered in the present case.

2. In addition to Borlase's book referred to above, there is another work involved in the present case which must be considered in connection with the *Official Index* now that that *Index* has been brought into existence. This is the paper by Laurentius Theodorus Gronovius

entitled "*Animalium belgicorum observatorum Centuria Quinta*" published in 1762 in volume 5 (: 353—382) of the serial publication *Acta Helvetica physico-mathematico-botanico-medica*. The proposal submitted to, and approved by the Commission in the present case included a request that the name *Astacus* published by Gronovius in the foregoing paper, in which (as shown in paragraph 4 of the application) Gronovius (as in his other works) used a non-binominal system of nomenclature, should be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*. Accordingly, Gronovius' paper of 1762 will need now to be placed on the *Official Index of Rejected and Invalid Works* at the same time that the name *Astacus* published in it is placed on the corresponding *Official Index of Rejected and Invalid Generic Names*.

11. At its meeting held at Copenhagen in August 1953, the Fourteenth International Congress of Zoology decided to insert a provision in the *Règles* establishing an "Official Index" to be styled the *Official Index of Rejected and Invalid Works in Zoological Nomenclature* and directing the insertion therein of the title of any work which the International Commission might either reject under its Plenary Powers or declare to be invalid for the purposes of zoological nomenclature (1953, *Copenhagen Decisions zool. Nomencl.* : 23—24). Since the foregoing provision applies to past, as well as to future, decisions by the International Commission in cases of this kind, the opportunity presented by the preparation of the present *Opinion* has been taken to record the insertion in the foregoing *Index Official* both of the title of Borlase (W.), 1758, *The Natural History of Cornwall* and of that of the paper by the author Gronovius published in 1762 which contains the name *Astacus* Gronovius (paragraph 10).

12. **Preparation of the Ruling giving in the present "Opinion" :** On 15th May 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)57, as supplemented by the action prescribed by the Fourteenth International Congress of Zoology, Copenhagen, 1953, as specified in paragraph 11 above.

13. The following are the original references for the generic names placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* by the Ruling given in the present *Opinion* :—

Astacus Borlase, 1758, *Nat. Hist. Cornwall* : 274

Astacus Gronovius, 1762, *Acta helvet. phys.-math.-bot.-med.* 5 : 365

Astacus Gronovius, 1764, *Zoophylac. Gron.* : 227

14. The titles of the works placed on the *Official Index of Rejected and Invalid Works in Zoological Nomenclature* by the Ruling given in the present *Opinion* are as follows :—

Borlase (William), 1758, *The Natural History of Cornwall*

Gronovius (Laurentius Theodorus), 1762, a paper entitled "*Animalium belgicorum observatorum Centuria Quinta*" published in volume 5 (: 353—382) of the serial publication *Acta Helvetica physico-mathematico-botanico-medica*.

15. As the present case is concerned only with the nomenclatorial status of a book and no question of the status of an available generic name is involved, the question of placing names on the *Official List of Family-Group Names in Zoology* does not arise. The question arising under the above head in connection with the generic name *Astacus* Fabricius, 1775, will be dealt with in a later *Opinion*³.

16. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953,

³ See footnote 1.

the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

17. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

18. The present *Opinion* shall be known as Opinion Three Hundred and Thirty-Two (332) of the International Commission on Zoological Nomenclature.

DONE in London, this Fifteenth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 27. Pp. 369—384

OPINION 333

Confirmation of *Mytilus edulis* Linnaeus, 1758, as the type species of the genus *Mytilus* Linnaeus, 1758 (Class Pelecypoda) (amplification of a Ruling given in *Opinion* 94)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 333

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*)

President : Professor James Chester Bradley (*Cornell University, Ithaca, N.Y., U.S.A.*) (12th August 1953)

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*) (12th August 1953)

Secretary : Mr. Francis Hemming (*London, England*) (27th July 1948)

B. The Members of the Commission

(Arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology)

Professor H. Boschma (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947)

Senor Dr. Angel Cabrera (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948)

Mr. Francis Hemming (*London, England*) (27th July 1948) (*Secretary*)

Dr. Joseph Pearson (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948)

Dr. Henning Lemche (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948)

Professor Teiso Esaki (*Kyushu University, Fukuoka, Japan*) (17th April 1950)

Professor Pierre Bonnet (*Université de Toulouse, France*) (9th June 1950)

Mr. Norman Denbigh Riley (*British Museum (Natural History) London*) (9th June 1950)

Professor Tadeusz Jaczewski (*Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland*) (15th June 1950)

Professor Robert Mertens (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950)

Professor Erich Martin Hering (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950)

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Professor J. R. Dymond (*University of Toronto, Toronto, Canada*) (12th August 1953)

Professor J. Chester Bradley (*Cornell University, Ithaca, N.Y., U.S.A.*) (12th August 1953) (*President*)

Professor Harold E. Vokes (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (12th August 1953)

Professor Béla Hankó (*Mezőgazdasági Muzeum Budapest, Hungary*) (12th August 1953)

Dr. Norman R. Stoll (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (12th August 1953)

Mr. P. C. Sylvester-Bradley (*Sheffield University, Sheffield, England*) (12th August 1953)

Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (12th August 1953)

OPINION 333

CONFIRMATION OF "MYTILUS EDULIS" LINNAEUS, 1758, AS THE TYPE SPECIES OF THE GENUS "MYTILUS" LINNAEUS, 1758 (CLASS PELECYPODA) (AMPLIFICATION OF A RULING GIVEN IN "OPINION" 94)

RULING :—(1) The designation by Schumacher (1817) of a particular structure (the hinge) exhibited by a particular specimen figured by him under the name *Mytilus anatinus* Linnaeus, 1758, as the "type" of the genus *Mytilus* Linnaeus, 1758, does not constitute a valid selection of that species as the type species of the foregoing genus.

(2) The first valid type selection for *Mytilus* Linnaeus, 1758, is the selection of *Mytilus edulis* Linnaeus, 1758, by Anton (1839).

(3) The entry of the name *Mytilus* Linnaeus, 1758, with the above species as type species, made on the *Official List of Generic Names in Zoology* by a Ruling given in *Opinion* 94, is hereby confirmed.

(4) The under-mentioned specific name is hereby placed on the *Official List of Specific Names in Zoology* as Name No. 286 :—*edulis* Linnaeus, 1758, as published in the combination *Mytilus edulis* (specific name of type species of *Mytilus* Linnaeus, 1758).

I.—THE STATEMENT OF THE CASE

On 1st August 1945 Dr. Harold E. Vokes (then of the *United States Department of the Interior, Geological Survey, Washington, D.C., U.S.A.*) submitted the following application, in which, after drawing attention to the fact that *Mytilus anatinus* Linnaeus, 1758, appeared to have been selected by Schumacher (1817) as the

type species of *Mytilus* Linnaeus, 1758 (Class Pelecypoda), twenty-two years before *Mytilus edulis* Linnaeus, 1758, was so selected by Anton (1839), expressed the view that great confusion would ensue of the latter species which now universally accepted as the type species of the foregoing genus were to be displaced from that position and asked the International Commission to use its Plenary Powers to prevent this from happening :—

Proposed use of the Plenary Powers to designate “*Mytilus edulis*” Linnaeus, 1758, as the type species of the genus “*Mytilus*” Linnaeus, 1758 (Class Pelecypoda, Order Filibranchiata): proposed validation of an entry in the “Official List” made in “Opinion” 94

By HAROLD E. VOKES

(Department of Geology, The Johns Hopkins University, Baltimore, Maryland, U.S.A.)

1. The generic name *Mytilus* was proposed by Linnaeus, 1758, with 17 species numbered 205 to 222 inclusive (Linnaeus, 1758, *Systema Naturae*, (ed. 10) 1 : 704—706) ; the species concerned in this request being *edulis*, No. 215, *cygneus*, No. 218, and *anatinus*, No. 219. No type species was designated nor indicated in this publication.

2. Lamarck (1799, “Prodrôme d’une nouvelle classification des coquilles” : (*Mém. Soc. Hist. nat. Paris* 1799 : 88), cited *M. edulis* as an example, but this cannot be construed as fixing the type species.

3. Schumacher (1817, *Essai d’un nouveau Système de habitations de Vers Testacés* : 107) cites “the figure of a hinge of” *Anodonta anatina* (*Mytilus anatinus* Linnaeus) as type species of the genus *Mytilus*. This selection transfers the generic name *Mytilus* to the fresh-water bivalve *Anodonta* Lamarck, 1799 (*supra cit.* L87, monotype *A. cygneus* (*Mytilus cygneus* Linnaeus)).

4. Children [April 1823, Lamarck’s Genera of Shells : *Quart. J. Sci.* 1823 : 33] selected *Mytilus magellanicus* Lamarck as type of *Mytilus* “Lamarck”. This species was not on the Linnean list and was therefore not available for selection as the type species of *Mytilus* Linnaeus.

5. Anton (1839, *Verzeichniss der Conchylien* : 17) selected *Mytilus edulis* Linnaeus as the type species of *Mytilus*, and this is apparently the first selection of this species, which is today universally considered

as the type species usually with a reference to Gray's citation of 1847. (Gray, J. E., 1847, "A list of the genera of recent mollusca, their synonyma and types". *Proc. zool. Soc. Lond.* **15** : 198).

6. So far as I am aware, no subsequent author has followed Schumacher's selection of *Mytilus anatinus* as the type species of the genus *Mytilus* Linnaeus, and to do so now would result in complete confusion, requiring the substitution of the name *Mytilus* for the fresh-water *Anodonta*, and apparently the proposal of a new name for the group of species which now bear that name ; so far as I am aware, no other name has ever been proposed for the species of the *edulis* group.

7. Furthermore, both the generic name *Mytilus* Linnaeus, with type species *M. edulis* Linnaeus, and *Anodonta* Lamarck, with type species *A. cygneus* (Linnaeus), have been placed on the *Official List of Generic Names*, under *Opinion* 94. This procedure, however, was clearly the result of inadequate study, since, in the "Statement of Case" issued with this *Opinion*, it is said : "It appears from the reports reaching the Secretary's office that . . . [these] . . . names are valid under the International Rules and that, therefore, they do not have to be adopted as 'nomina conservanda' under 'Suspension of the Rules'."

8. From the evidence cited above, the latter statement is clearly inaccurate, and the position of *Mytilus*, with type *Mytilus edulis*, is an equivocal one. It is, therefore, requested that the International Commission on Zoological Nomenclature, using the Plenary Powers granted it by the International Congress of Zoology at its meeting held at Monaco (1913), suspend the Rules in the International Code of Zoological Nomenclature, and declare *Mytilus edulis* Linnaeus to be the type species of *Mytilus* Linnaeus under such suspension of the Rules.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. **Registration of the present application :** Immediately upon the receipt of Dr. Vokes' application, the problem of the species to be accepted as the type species of the genus *Mytilus* Linnaeus, 1758, was allotted the Registered Number Z.N.(S.) 193.

3. Issue of Public Notices in November 1947 : On 20th November 1947 Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was issued to the serial publications prescribed by the Ninth International Congress of Zoology, Monaco, 1913. The issue of this Public Notice elicited no objection to the action proposed.

4. Postponement of consideration of the present application in Paris in 1948 : It had been hoped that, as no objection had been lodged against the proposed use of the Plenary Powers in the present case, it would be possible for the International Commission to reach a decision on it during its Session held in Paris in 1948, and arrangements had been made for its submission to the Commission at that Session. The time available in Paris was, however, so short, and so much of it was devoted to considering proposals for the amendment, clarification and amplification of the *Règles* that it proved impossible for the Commission to deal with all the applications that were then awaiting attention. The present was one of the applications which for this reason it was impossible to lay before the Commission at that Session.

5. Publication of the present application : In the period immediately following the close of the Paris Session of the Commission, the resources of the Secretariat were wholly devoted to the preparation and publication of the Official Record of the Proceedings at that Session and it was not possible until the summer of 1950 to make arrangements for the resumption of publication in the *Bulletin of Zoological Nomenclature* of applications relating to particular names submitted by specialists for decision. The present application was included in the first group of such applications to be published after the resumption by the Commission of this side of its work. It was sent to the printer on 4th December 1950 and was published on 20th April 1951 in Part 1 of volume 2 of the *Bulletin* (Vokes, 1951, *Bull. zool. Nomencl.* 2 : 31—32).

6. Issue of Public Notices in April 1951 : Under the revised arrangements prescribed by the Thirteenth International Congress

of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 20th April 1951, both in Part 1 of volume 2 of the *Bulletin of Zoological Nomenclature*, the Part in which Dr. Vokes' application was published, and also to the other prescribed serial publications. In addition, Public Notice was given to a number of zoological and paleontological serial publications in Europe and America.

7. Support received for the present application : The issue of the prescribed Public Notices elicited communications from five specialists and from one committee of specialists. The authors of these communications, all of whom supported Dr. Vokes' application, were the following :—(a) Dr. Joshua L. Baily, Jr. (*San Diego, California, U.S.A.*) ; (b) Professor R. Ph. Dollfus (*Muséum National d'Histoire Naturelle, Paris*) ; (c) Professor Gilbert Ranson (*Muséum National d'Histoire Naturelle, Paris*) ; (d) Professor Dr. C. R. Boettger (*Natur-Museum u. Forschungs-Institute Senckenberg, Senckenberg-Anlage, Frankfurt a. M., Germany*) ; (e) Dr. Joseph P. E. Morrison (*United States National Museum, Division of Mollusks, Washington, D.C., U.S.A.*) ; (f) the Joint Committee on Zoological Nomenclature for Paleontology in America. The communications so received are reproduced in the immediately following paragraphs.

8. Support received from Dr. Joshua L. Baily, Jr. (San Diego, California) : On 22nd June 1951 Dr. Joshua L. Baily, Jr. (*San Diego, California*) addressed the following letter to the Commission in which he supported the proposed stabilisation of *Mytilus edulis* Linnaeus, 1758, as the type species of the genus *Mytilus* Linnaeus, 1758, but at the same time pointed out that in the case of the genus *Arca* Linnaeus the Commission had rejected action taken by Schumacher in 1817 of a character exactly similar to that which had given rise to the present difficulties in regard to the type species of the genus *Mytilus* Linnaeus (Baily, 1951, *Bull. zool. Nomencl.* **2** : 339) :—

Since the names *Mytilus* Linnaeus, 1758, and *Anodonta* Lamarck, 1801, with their respective type species, are already on the *Official*

List, I fail to see that any further action should be needed to stabilize them but, if such action is necessary, I should certainly support it. I would, however, like in this connection to call attention to the following point not mentioned in the application (1951, *Bull. zool. Nomencl.* 2 : 31—32). Schumacher, in his *Essai nouv. Syst. Vers. test.* of 1817, also figured the hinge of *Arca* Linnaeus as a type selection and the International Commission on Zoological Nomenclature, in fixing the type of *Arca*, discarded Schumacher's selection. I have not seen Schumacher's *Essai*, but Dr. H. A. Rehder, who has consulted it for me, tells me that the types of *Arca* and of *Mytilus* are selected in exactly the same way, from which I conclude that the discarding of the type selection of *Arca* automatically implies the discarding of the type selection of *Mytilus* as well, and that therefore the earliest available type selection for *Mytilus* is that of Anton, and that *Mytilus edulis* is the type whether the rules are suspended or not.

The names *Mytilus* and *Anodonta* were placed on the *Official List of Generic Names in Zoology* before the *Official List of Specific Trivial Names* was established. I believe, therefore, that the names *edulis* Linnaeus, 1758, and *cygneus* Linnaeus, 1758, as originally published as *Mytilus edulis* and *Mytilus cygneus*, are not on the latter List. I would accordingly suggest that these specific trivial names be now added to the *Official List*.

9. Support received from Professor R. Ph. Dollfus (Muséum National d'Histoire Naturelle, Paris) : In a letter dated 25th June 1951 Professor R. Ph. Dollfus (*Muséum National d'Histoire Naturelle, Paris*) notified to the Commission his views as regards a number of then recently published applications and, as regards the present case, indicated his support as follows :—" Je suis pour la conservation de *Mytilus* Linnaeus, 1758 (espèce type : *Mytilus edulis* Linnaeus, 1758) " (Dollfus, 1952, *Bull. zool. Nomencl.* 6 : 171).

10. Support received from Professor Gilbert Ranson (Muséum National d'Histoire Naturelle, Paris) : In a note received on 31st July 1951 Professor Gilbert Ranson (*Muséum National d'Histoire Naturelle, Paris*) intimated as follows his support for the application submitted by Dr. Vokes (Ranson, 1952, *Bull. zool. Nomencl.* 6 : 171) :—

Je suis tout à fait d'accord avec H. E. Vokes (1951, *Bull. zool. Nomencl.* 2 : 31—32), pour que *Mytilus edulis* Linnaeus, 1758, soit considéré comme l'espèce type du genre *Mytilus* Linnaeus.

11. Support received from Professor Dr. C. R. Boettger (Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany) : In a note transmitted to the Commission by Professor Dr. R. Mertens under cover of a letter dated 27th August 1951 Professor Dr. C. E. Boettger (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M.*) furnished his comments on a number of current applications and as regards the present case, indicated as follows his support for the action proposed by Dr. Vokes :—

Ich stimme durchaus dem Vorschlag bei, dass *Mytilus edulis* Linnaeus zum Typus der Gattung *Mytilus* Linnaeus unter Ausserkraftsetzung der entgegengesetzten Regeln erklärt wird. Im ubrigen habe ich zu den Ausfuehrungen nichts hinzuzufügen.

12. Support received from Dr. Joseph P. E. Morrison (United States National Museum, Division of Mollusks, Washington, D.C., U.S.A.) : In a letter dated 4th October 1951 Dr. Joseph P. E. Morrison (*United States National Museum, Division of Mollusks, Washington, D.C., U.S.A.*) notified as follows his support for the present application (Morrison, 1952, *Bull. zool. Nomencl.* 9 : 144) :—

Both as a specialist on the Mollusks, and as a former teacher of Zoology in High School, College, and University, may I go on record as wholeheartedly in support of Dr. Vokes' petition to the International Commission to use its Plenary Powers in the case of *Mytilus* Linnaeus, to fix the species *edulis* Linnaeus as the type species.

In my opinion, this is exactly the sort of case for which the International Commission has been granted such Plenary Powers. Without such a *nomen conservandum* action as requested in this case, two Family or Subfamily names would have to be changed, as well as every High School Zoology text-book I have ever seen in the United States !

13. Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America : In a letter dated 6th February 1952 (received on 9th April 1952) Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on

Zoological Nomenclature for Paleontology in America, reported that by nine votes to two votes, the Joint Committee had resolved in favour of the application submitted by Dr. Vokes. The letter so received was as follows :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you that, being polled, they voted : To support the petition (nine) :—(1) A. Myra Keen ; (2) Siemon W. Muller ; (3) Katherine V. W. Palmer ; (4) Bryan Patterson ; (5) John B. Reeside, Jr. ; (6) G. Winston Sinclair ; (7) J. Marvin Weller ; (8) R. C. Moore ; (9) Bobb Schaeffer. To oppose the petition (two) :—(1) Don L. Frizzell ; (2) J. W. Wells.

14. The question of principle involved in the present case : In his letter dated 22nd June 1951 reproduced in paragraph 8 of the present *Opinion* Dr. Joshua L. Baily threw an entirely new light upon the present application by pointing out that the case of *Mytilus* Linnaeus, 1758, was exactly parallel with that of *Arca* Linnaeus, 1758, Schumacher in each case having published an observation which had been interpreted by some later authors as constituting a type-selection under Rule (g) in Article 30. In the case of *Arca*—as in the present case—confusion and undesirable name-changing would have resulted if Schumacher's action had constituted a valid type-selection. In the consideration of the case of *Arca* Linnaeus in connection with an application submitted by Dr. Philip W. Reinhart the action taken by Schumacher was examined and rejected (*Opinion* 189 published in 1945, *Ops. Decls. int. Comm. zool. Nomencl.* 3 : 93—108) but this view was taken only incidentally and was not embodied in the operative portion (then styled "Summary") of that *Opinion*. The foregoing *Opinion* was adopted in 1944, that is four years prior to the Session of the Commission held in Paris in 1948, at which it was decided that general questions of principle (such as whether action such as that taken by Schumacher in 1817 when he designated a particular structure of a given specimen as the "type" of a genus constituted a valid selection of the species so cited as the type species of the genus in question) should in future not be embodied in *Opinions* relating to individual cases but should form the subject of express decisions which

should moreover be promulgated not in *Opinions* but in the series known as *Declarations*. Immediately upon the receipt of Dr. Baily's letter, Mr. Francis Hemming, as Secretary, took the view that in the circumstances the proper course as regards the question of the type species of the genus *Mytilus* Linnaeus would be to abandon the application in the form in which it had been submitted and in place of pursuing that application to invite the Commission (1) to render a *Declaration* that action of the kind taken by Schumacher in the case of the names *Arca* Linnaeus and *Mytilus* Linnaeus did not constitute a valid selection of a type species for the genus concerned, and (2) consequently to render an *Opinion* rejecting Schumacher's alleged selection of *Mytilus anatinus* Linnaeus, 1758 as the type species of *Mytilus* Linnaeus and confirming the position of that generic name on the *Official List of Generic Names in Zoology* with *Mytilus edulis* Linnaeus, 1758, as its type species. Mr. Hemming made a suggestion on these lines to Mr. Vokes who replied immediately (on 30th July 1951) concurring in the action proposed. Pressure of other work made it impossible to pursue the matter further at that time. When this question was considered again in June 1952, it was felt that the better course would be to bring this matter before the Colloquium on Zoological Nomenclature which by that time it had been decided to summon to meet at Copenhagen in the last week in July 1953, so that the Commission, on receiving the advice of the Colloquium, might, if it thought proper so to do, recommend the Fourteenth International Congress of Zoology to insert words in Rule (g) of Article 30 in the sense indicated above.

15. Clarification of Rule (g) in Article 30 by the Fourteenth International Congress of Zoology, Copenhagen, 1953: In accordance with the arrangements outlined in the preceding paragraph, Mr. Hemming prepared a paper in May 1953 for the consideration of the Colloquium recommending the clarification of Rule (g) in Article 30 in such a way as to exclude from the scope of that Rule action such as that taken by Schumacher in 1817. This problem was entered on the Agenda of the Colloquium as Case No. 44, Mr. Hemming's paper being registered as Document 44/1 (Hemming, 1953, *Bull. zool. Nomencl.* **10** : 406—408). The recommendation so submitted won the support of the Colloquium, and, on the proposal of that body, was

submitted by the Commission to the Fourteenth International Congress of Zoology, by which it was approved. Under the decision so taken a provision was added to Rule (g) in Article 30 enacting that "where an author specifies, as the "type" of a given nominal genus, a particular structure exhibited by a particular specimen referred by the author concerned to one of the nominal species originally included in that genus, that action is not to be treated as constituting the selection, as the type species of the genus concerned, of the nominal species to which the specimen in question was so referred". (1953, *Copenhagen Decisions zool. Nomencl.* : 71, Decision 134.)

16. Submission in 1954 of a revised application : The addition made to Rule (g) in Article 30 by the Fourteenth International Congress of Zoology quoted in the immediately preceding paragraph removed altogether the threat to the position of *Mytilus edulis* Linnaeus, 1758, as the type species of *Mytilus* Linnaeus, 1758, which had prompted Dr. Vokes in 1945 to submit his application in the present case. All that remained to be done was to render an *Opinion* confirming, in the light of the foregoing decision, the position on the *Official List of Generic Names in Zoology* of the generic name *Mytilus* Linnaeus with *Mytilus edulis* Linnaeus as the type species of the genus so named. To this end Mr. Hemming, as Secretary, prepared the following proposal for the consideration of the Commission :—

Revised proposal submitted in 1954

(1) The designation by Schumacher (1817) of a particular structure (the hinge) exhibited by a particular specimen figured by him under the name *Mytilus anatinus* Linnaeus, 1758, as the "type" of the genus *Mytilus* Linnaeus, 1758, does not constitute a valid selection of that species as the type species of the foregoing genus. (2) The first valid type selection for *Mytilus* Linnaeus, 1758, is that of *M. edulis* Linnaeus, 1758, by Anton (1839). (3) The name *Mytilus* Linnaeus, 1758, with the above species as type species is hereby confirmed in its position on the *Official List of Generic Names in Zoology*. (4) The specific name *edulis* Linnaeus, 1758, as published in the combination *Mytilus edulis*, is hereby placed on the *Official List of Specific Names in Zoology*.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

17. Issue of Voting Paper V.P.(54)7 : On 27th February 1954, a Voting Paper (V.P.(54)7) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal “relating to the generic name *Mytilus* Linnaeus, 1758, as set out at the foot of the present Voting Paper”. The proposal here referred is that which has been reproduced in paragraph 16 of the present *Opinion*.

18. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 27th May 1954.

19. Particulars of the Voting on Voting Paper V.P.(54)7 : The state of the voting on Voting Paper V.P.(54)7 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following nineteen (19) Commissioners (arranged in the order in which Votes were received) :*

Sylvester-Bradley ; Holthuis ; Hering ; Boschma ; Vokes ; Riley ; do Amaral ; Esaki ; Lemche ; Dymond ; Hemming ; Bonnet ; Cabrera ; Mertens ; Hankó ; Pearson ; Bradley (J.C.) ; Jaczewski ; Stoll ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned :*

None.

20. Declaration of Result of Vote : On 28th May 1954, Mr. Hemming, Secretary to the International Commission, acting as

Returning Officer for the Vote taken on Voting Paper V.P.(54)7, signed a Certificate that the Votes cast were as set out in paragraph 19 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

21. Preparation of the Ruling given in the present "Opinion" :

On 8th July 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(54)7.

22. The following is the original reference for the name placed on the *Official List of Specific Names in Zoology* by the Ruling given in the present *Opinion* :—

edulis, *Mytilus*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 705

23. The reference for the type-selection for the genus *Mytilus* Linnaeus, 1758, cited in the Ruling given in the present *Opinion* is : Anton, 1839, *Verz. Conchylien* : 17.

24. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

25. At the time of the submission of the original application dealt with in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled

the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

26. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

27. The present *Opinion* shall be known as *Opinion* Three Hundred and Thirty-Three (333) of the International Commission on Zoological Nomenclature.

DONE in London, this Eighth day of July, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

NOTE TO SUBSCRIBERS

The present Volume (Vol. 9) will be complete on the publication of Part 28 containing the Indexes, Title page, etc. This Concluding Part is now in course of preparation, and will, it is hoped, be published at an early date.

**OPINIONS AND DECLARATIONS
RENDERED BY THE INTER-
NATIONAL COMMISSION ON
ZOOLOGICAL NOMENCLATURE**

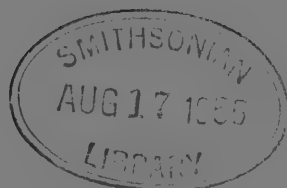
Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

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Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 9. Part 28. Pp. 385—416
(also published with this Part : T.P.—XIV)

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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE OPINIONS AND DECLARATIONS PUBLISHED IN THE PRESENT VOLUME

A. The Officers of the Commission

Honorary Life President : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

President : (Vacant).

Vice-President : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

Secretary : Mr. Francis Hemming (*London, England*).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

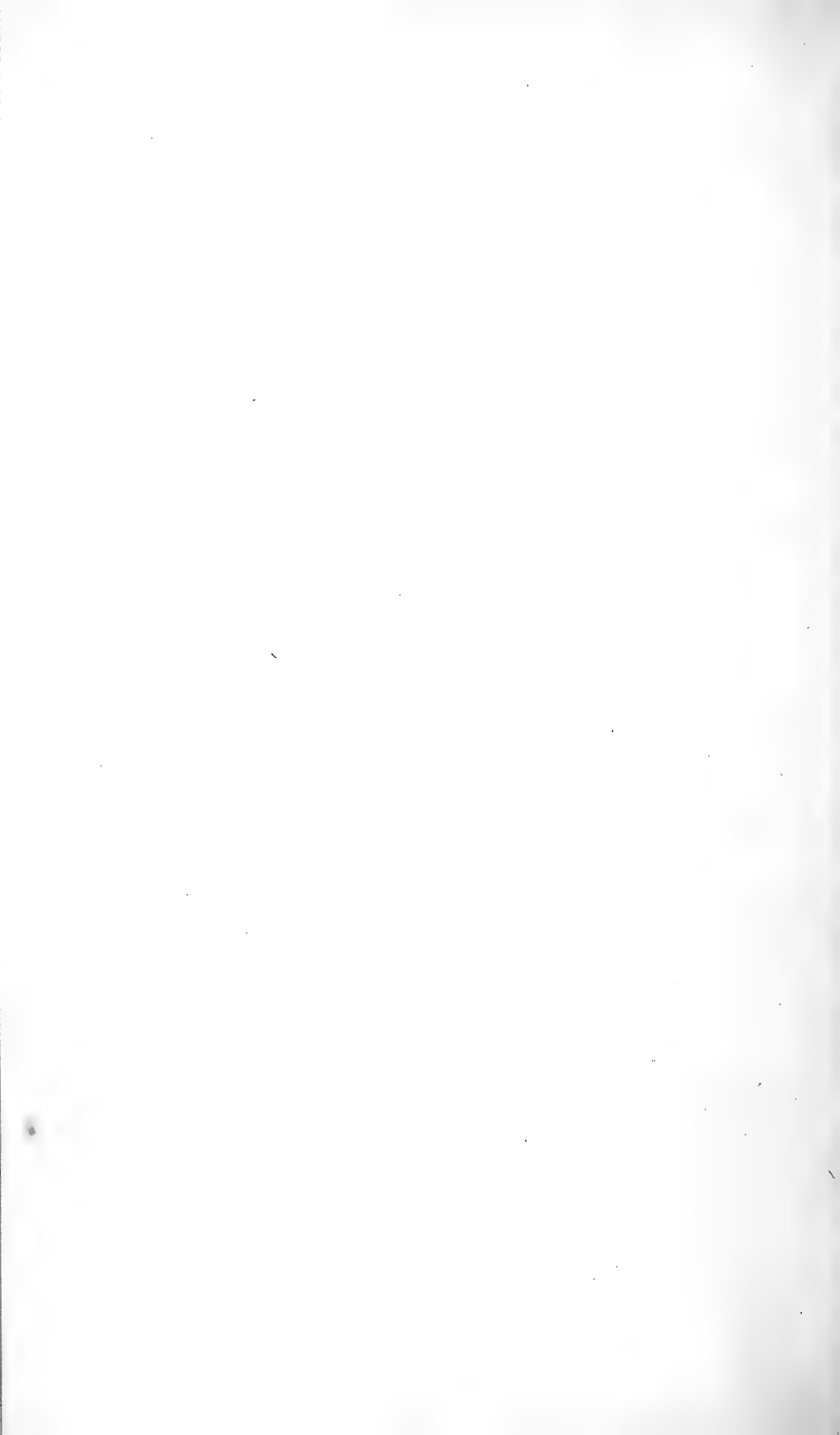
Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

Corrigenda

- page 29. Footnote 3, line 3 : substitute “ that no generic name ” for “ that a generic name ”.
- page 83. Line 11 of paragraph (3) of Ruling : substitute “ *Spirularius* ” for “ *Spirulaeus* ”.
- page 89. Line 8 from bottom : substitute “ *Spirularius* ” for “ *Spirulaeus* ”.
- page 124. Line 18 : substitute “ Zimmer ” for “ Zimmerman ”.



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